

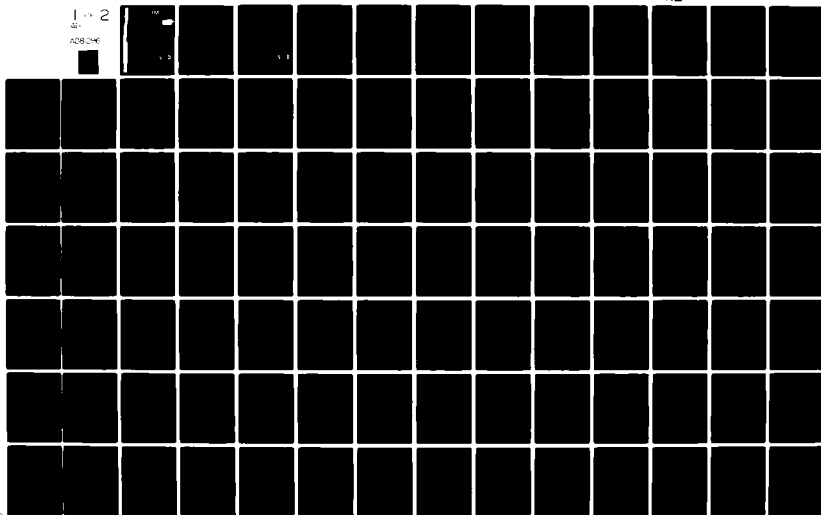
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November 1974

ANALYZING GLOBAL INTERDEPENDENCE

by

Hayward R. Alker, Jr.
Lincoln P. Bloomfield
Nazli Choucri



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Volume I
**ANALYTICAL PERSPECTIVES
AND POLICY IMPLICATIONS**

by
Lincoln P. Bloomfield and Hayward R. Alker, Jr.
with Ann Alker
Appendices by
Ann Alker and Steve R. Pieczenik



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This study is one of a number done by academic and other research institutions for the Department of State as part of its external research program. The program is planned and coordinated by the Department of State Research Council and managed by the Office of External Research in the Bureau of Intelligence and Research. It is designed to supplement the Department's own research capabilities and to provide independent, expert views to policy officers and analysts on questions with important policy implications.

On many occasions in recent years, both private citizens and government officials have talked and written about the trend toward increasing interdependence, with complex and shifting relationships, among the "actors" on the world scene. For obvious reasons, the emphasis usually is placed on economic relationships, although we are all aware that interdependence increasingly is apparent in other spheres as well--political, strategic, cultural, and so on. Indeed, one of the problems for any student of interdependence is posed by the linkages between or among such sectors.

As they thought about official and private studies and discussions of interdependence, a number of Department of State officers became convinced that at least some aspects of the phenomenon merited more serious or extensive scholarly attention. Do social scientists, they asked, have concepts and methods that can give us a more adequate understanding of the extent and nature of interdependence? Can they provide us with better means for checking assumptions that inform much of foreign policy?

The suggestion for a "conceptual and methodological" study of interdependence came from Mr. Herbert J. Spiro, of the Department's Policy Planning Staff. The detailed terms of reference for the study, designed as a guide for institutions interested in submitting research proposals on a competitive basis, were developed by Mr. Spiro and Mr. Pio D. Uliassi, of the Office of External Research, who served as the project monitor. Both drew generously from the comments of other Department officers.

We in the Department of State have already profited from the effort to define our own policy-related research interests in a more precise way from our meetings with the research team at M.I.T. and from the draft versions of this study that have been quite widely disseminated within our establishment. Our hope now, as it was when the project was first conceived, is that the published study will stimulate additional fruitful discussion and independent work on the problem of interdependence by private social scientists.

E. Raymond Platig, Director
Office of External Research
Bureau of Intelligence and Research
Washington, D. C. 20520

This study was supported by the Department of State under Contract #1722-320084. Views or conclusions contained in this study should not be interpreted as representing the official opinions or policies of the Department of State.

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ANALYZING GLOBAL INTERDEPENDENCE

by

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Hayward R. Alker, Jr.
Lincoln P. Bloomfield
Nazli Choucri

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Analyzing Global Interdependence
Volume I

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ANALYZING GLOBAL INTERDEPENDENCE

Volume I

ANALYTICAL PERSPECTIVES AND POLICY IMPLICATIONS

By

Lincoln P. Bloomfield and Hayward R. Alker, Jr.
with Ann Alker

Appendices by

Ann Alker and Steve R. Pieczenik

Volume II

ENERGY INTERDEPENDENCE

By

Nazli Choucri
with Vincent Ferraro

Volume III

METHODOLOGICAL PERSPECTIVES AND RESEARCH IMPLICATIONS

By

Hayward R. Alker, Jr.
with Nazli Choucri

Volume IV

SUMMARY

Prepared by

Irirangi C. Bloomfield

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FOREWORD TO STUDY

ANALYZING GLOBAL INTERDEPENDENCE

In the summer of 1973 the U. S. Department of State awarded a contract to the M. I. T. Center for International Studies to conduct a year-long study that would, in the words of the R. F. P., "describe evolving patterns of interdependence in a multipolar world and develop new methods for projecting and appraising such patterns."

Given a projected level of effort of only nine professional man-months for the study, our governing research principle was to make maximum use of existing comparative advantages of the researchers involved, drawing to the greatest extent possible on previous or concurrent work they and their graduate students were doing. (It must however be said that all of us found ourselves entering new intellectual ground as our research proceeded.)

It was thus agreed that Professor Hayward R. Alker, Jr., would review the scholarly literature for issues, themes, approaches, and problems bearing on interdependence, and that he would also take responsibility for drawing conclusions concerning appropriate research methodologies. Professor Alker, drawing on substantial research papers on specific scholarly controversies, prepared (with Ann Alker) Chapter II of Volume I of the report. His methodological review appears as Volume III, in which Professor Nazli Choucri has coauthored the concluding chapter. Among the working papers developed in the course of that part of the project were the following, which are available on request from the M. I. T. Center for International Studies:

Lily Gardner, "Interdependence, Independence, Dependence, and Integration: Whither Western Europe?"

Fabio Basagni, "The New 'Political Economy' Controversy"

Ann Alker, "The Limits to Growth Controversy"

Richard Kugler, "Strategists and Their Critics: The United States National Security Policy Controversy"

Professor Nazli Choucri took responsibility for developing a case study on energy interdependence, with some focus on the Middle East, that would serve the threefold purposes of: suggesting and applying an approach potentially useful in other sectors or geographic regions; illustrating some of the analytical problems, issues, and findings typical of scholarly interdependence controversies; and supplying some policy-relevant insights. Her report is bound separately as Volume II of the report. Professor Choucri also coauthored Chapter IV of Volume III. She was assisted throughout her study by Vincent Ferraro, who contributed valuable research assistance, editorial help, and substantive criticism. Chapter V of Volume II was written with the collaboration of Ijaz Gilani. Major working papers, also available on request, are:

Vincent Ferraro, "Competing Transnational Energy Regimes"

Ijaz Gilani, "Interdependence and Community-Building Among Competing Regimes of the Arab World"

The third dimension of the study was the chief preoccupation of the undersigned, who also acted as coordinator of the project. My own approach follows a generally policy-oriented perspective. In Chapter I of Volume I, I sought to parse out the meaning of interdependence so that it might be approached with more clarity; in Chapter III, I endeavored to offer the outlines of a policy analysis leading to conclusions--which are my own--regarding some desirable policy directions. In the course of this research I asked Ann Alker to prepare a brief background paper on U. S. Nonfuel Mineral Import Practices, which as a useful assembly of data is included as Appendix A to Volume I. I also asked Steve R. Pieczenik, who in addition to being a practicing psychiatrist is a doctoral candidate in the M. I. T. Department of Political Science, to see what possibly relevant insights concerning dependency situations might be drawn from the psychiatric literature. His brief but provocative response is also included, as Appendix B to Volume I.

Although final responsibility remains with the cited authors, each of the principal authors read and commented on each other's contributions for this report, and we are all grateful for the help so received. Dr. Choucri and I benefited from the helpful criticisms of our draft chapters by David A. Kay and Amelia C. Leiss, and I further profited from a review of my chapters by William Diebold, Jr. Professor Alker's work was critiqued in preliminary form by Robert O. Keohane and Ramkrishna Mukherjee. His research for Chapter III of Volume III

was assisted by Scott Ross. Finally, we had the opportunity to consider numerous comments from officers of the Department of State who reviewed the report in draft form.

While the contract did not call for a summary to be prepared, I increasingly felt the need for one, given the complexity of the subject matter and the fact that, despite the project's modest size, we were producing considerably more written material than we had anticipated. We therefore commissioned Irirangi C. Bloomfield, who has in the past performed numerous précis and editorial tasks for the Center, to prepare a summary volume, which we have denominated Volume IV.

My colleagues and I are grateful to Pio D. Uliassi of INR/XR for his tactful and understanding performance of the role of Project Monitor. We are very indebted to Jeanne Amnotte and to Dovianna Barrens, who succeeded her, for devoted and skillful handling of the manifold tasks of Project Secretary.

Lincoln P. Bloomfield
Project Director

Cambridge, Massachusetts
November 1974

CHAPTER I

THE SEMANTICS OF INTERDEPENDENCE:
A POLICY PERSPECTIVE

by

Lincoln P. Bloomfield

CHAPTER I

THE SEMANTICS OF INTERDEPENDENCE: A POLICY PERSPECTIVE

by

Lincoln P. Bloomfield*

The most striking thing about interdependence is that, measured by official rhetoric and scholarly activity, it is now upon us like fate. The second most striking thing about it is that, for a blinding truth, it is uncommonly hard to define. In fact, it seems to mean anything one wants it to mean. Interdependence is invoked by some as a virtue and by others as a besetting sin. Its name is spoken in tones of prophesy, injunction, or mortification, depending on the speaker's subjective picture of reality.

It has come to stand for virtually any given set of relationships or interactions, past, present, and future, between and among any given number of God's creatures and man's enterprises. A periodical entitled The Interdependent describes it as "population plus food plus justice." More lyrically,

It is the link between the disappearance of anchovies off the coast of Peru and the higher price of soybeans in Peoria, between the auto fumes caught in the atmosphere and the drifting of monsoons off their customary life-giving paths, between spiraling birth rates and the dignity of women, between the scarcity of raw materials

*The assistance is acknowledged of Irirangi C. Bloomfield in the drafting of Section B on economic dependencies, also in her helpful substantive and editorial suggestions, along with those of William Diebold, Jr., David A. Kay, and Amelia C. Leiss.

and the erosion of money. . . .¹

In much the same vein UN Secretary-General Kurt Waldheim at the Special General Assembly Session on Resources in April 1974 listed together poverty, population, food, energy, military expenditures, and the monetary system, and told the delegates that

. . . we must recognize that they are all interconnected, and interact on each other, and in so doing have a multiplier effect.²

Other statements of the problem of interdependence carry equally all-embracing definitions. Little wonder that, like Mark Twain's weather, everyone agonizes about interdependence but no one seems to know quite what to do about it--or even to agree what "it" in fact is, either factually or conceptually. What follows is an effort to parse out the multiple meanings, values, and premises embodied in interdependence as a concept with great potential policy significance.

A. Types of Interdependence

At the most elemental level, all humankind depend on such "commons" as the atmosphere, outer space, the seabed, high seas and international straits, sunlight, the earth's heat, and both fuel and non-fuel minerals. None of these will prove to be self-adjusting on the basis of world "market" processes but on the contrary will, as global demand steepens, be less and less "available" unless regulated by human intervention (as some have already been to a modest degree). The human family is also dependent on one another's common sense and mercy in the face of perils produced by man's technological ingenuity. These range from epidemic disease and ocean befouling, through catastrophic weather modification and climate change, to genetic engineering and other potential ecological and genocidal threats.

A second type of interdependence was created the day the first

¹Edward M. Korry in The Interdependent, UN Association of the U.S.A., April 1974.

²New York Times, April 10, 1974.

nuclear explosive device was detonated at Alamagordo in 1945. Few would dispute that strategic nuclear interdependence has created an unprecedented mutual linkage at the most elemental level of all, that of survival. Strategic interdependence exists between allies and between adversaries.

Not all alliance relationships are interdependent in the sense of mutual dependence on something of value, disengagement from which entails costs--a definition to which we will return. The United States furnishes military protection to forty-odd countries, some of which could not survive without it (e.g., Israel, South Vietnam, South Korea, Cambodia), but others of which are under no particular threat or have other options they could exercise (e.g., Philippines, Australia, New Zealand, much of Latin America). All allies are in varying degree militarily dependent on us, and became allies because we felt we needed them.

But the United States is genuinely interdependent with only those alliance partners upon whom we feel ourselves to a degree still dependent--Western Europe, Japan, and additionally perhaps South Korea and the Philippines for not unbalancing the Pacific equilibrium by changing sides, and Central America for not creating a new Caribbean embarrassment for us, let alone a Soviet or Chinese missile base (also perhaps Israel for minimum harmony in U. S. domestic politics). Other alliance relationships are largely asymmetrical.

But the towering example of true, strategic interdependence is between the only two countries able to devastate most of this planet. The two nuclear superpowers are acutely aware of their reciprocal dependence on rationality, humanity, or fear to the end that nuclear weapons are never actually used. Most of their strategists have now made the calculations of unacceptable costs, alongside nonexistent benefits, entailed in breaking out of the restraining web of deterrence and nonuse which the grim facts of fission and fusion have spun. Detente has reduced public apprehension about the nuclear threat. But the widespread mutual dependencies on nuclear sanity may escalate again as others follow the melancholy Indian example and also as the opportunities mount for nuclear theft by terrorists or common criminals.

But the most specific meaning of "interdependence" is not mankind's continuing dependence on the biosphere or on the good will and sanity of an American President and Soviet Politburo to forestall mutual annihilation. Today it means that third web of transactions, flows, and interactions in the realms of trade, resources, investment, and money, a web in which virtually all countries are increasingly enmeshed, and

which has recently become far more visible, more complicated, and more problematic in its effects.

Economic interdependence, like the other two types, also requires new ground rules to minimize tensions and maximize benefits. But to do so requires better conceptual tools than we now possess. Only then can one discipline the subject matter sufficiently to discriminate between types, forms, and degrees of interdependence, in turn enabling policymakers to work with a broader and more rational perspective on this range of issues.

More than the strategic type, economic interdependence consists of situations in which, through choice, nations and groups interact with one another in ways that set up mutual dependencies and constraints of varying type and intensity. It encompasses resources, manufacture and trade, and the networks of money, people, and communications which bespeak the new mobility of such factors.

By itself this web of economic interdependence has enormous political impact, particularly as its consequences deepen for the American economy in ways our European, Japanese, and Canadian friends, as well as the developing countries, earlier experienced.

But in addition it interacts in crucial ways with the military-strategic equations. The United States and its chief military allies, Western Europe, Canada, and Japan, all are players in a perpetual economic balancing game involving their trade, investments, currencies, and current accounts. But that balance is complicated in all three cases by their mutual security arrangements. That equilibrium between the military and economic aspects of advanced-nation relationships is in turn governed by the current temperature of the Cold War.

When the Soviet Union behaves hostilely, no Western alliance partner has any difficulty in keeping its security relationship distinct from the issues of trade and money. But détente and a lessened sense of threat cause the economic issues to become paramount. The dollar costs of U.S. military protection become an issue of finance rather than of survival; the United States hints at reduction of its guarantees unless it is granted nondiscriminatory Common Market treatment for its products, or unless Japan curbs certain exports; Canada makes new rules to reduce dependence on American capital and imports without asking whether its other dependencies on the U.S. will be affected. In the social scientists' jargon, the "low politics" of goods and money have become more salient, while the erstwhile "high politics" of

military security in this era are increasingly used as makeweights in the balance of tradeoffs between salesmen and customers.

It would not take very much in the way of change of policy and/or leadership in Moscow to send fresh chills through the Western world, rapidly restoring military security to its former primacy. Once again the alliances' inherent asymmetry due to U.S. military power would be regarded as a fact, promising needful protection. But when such protection is not felt to be needed, the asymmetry clearly becomes a source of strain.

Thus in a period of low "threat perception," economic and resource interdependency can strongly influence strategic relationships, and if sufficiently constraining on one party could even cause alliance shifts. For example, the agreement initialed by Japan and the Soviet Union in March 1974 to help open the vast coal basin in the Yakut region could portend a different future Asian lineup, given Japan's 99% dependency on imported petroleum.

Of course, the way military security interacts with economic activity differs according to region. As noted, main U.S. alliances intermix the two along the sliding scale of Cold War threat perception; the same applies to U.S. relations with some of Latin America and the Middle East. East-West relations obviously represent a far different mix, in which political security considerations are paramount. And clearly some--but by no means all--natural resource dependencies contain an important security component.³

Elsewhere, there is little question that economic relationships have increasingly dominated the state of relations. Indeed, in a period of low general war threat, economic interdependence to some people becomes the security problem, coinciding as it does with a simultaneous movement in foro domestico for a more equitable distribution of income, improved social services, and stable growth. Even as external contacts and dependencies have increased, welfare functions have become governmentalized and states consequently more, rather than less, preoccupied with their internal affairs. In this sense interdependence is not just a relationship between watertight trading entities called states. It is a label for complex penetrations deep into the

³See published remarks of President Nixon and Secretary Kissinger at various functions in connection with February 1974 Energy Conference in Washington, D.C.; also Newsweek, February 25, 1974.

internal fabric of societies which increasingly threaten the ability of governments to insulate their economies from outside turbulence in order to pursue more autonomous wage, price, and distribution policies.

This is not to say (as some do) that international economics have now replaced military power as the authentic subject matter of security (except in the unfortunate historic sense that disputes arising from economic stress can generate military-type disputes). Closer to the truth is that international economics have become increasingly salient to national and transnational policymaking, and consequently highly politicized. To the extent that growing mutual political-economic dependencies either reduce or intensify the strains of domestic and international political life, to that extent they will surely affect policymaking about the life-and-death issues of war and peace.

B. Interdependence as a "Fact"

Officials of the United States government have increasingly asserted that Americans confront a world in which "interdependence is a fact, not a choice." Secretary of State Kissinger, whose words those are, has on several occasions juxtaposed this factual assertion with the companion fact of nationalism that impedes cooperative action:

Economic interdependence is a fact. We must resolve the paradox of growing mutual dependence and burgeoning national and regional identities. (London, December 12, 1973.)

In January 1974 Secretary Kissinger not surprisingly focused on energy as a symbol of interdependence:

If anything was needed to illustrate the interdependence of nations in this world, it is what has happened in the field of energy. (January 10, 1974.)

He spoke to the delegates to the Washington Energy Conference of the "birth pangs of global interdependence" which have now become a present reality. And he spelled out to the April 1974 UN General Assembly Special Session the need to "come to grips with the facts of our interdependence":

Whatever our ideological belief or social structure, we are part of a single international economic system on which all of our national economic objectives depend. (April 15, 1974.)

And President Ford in speaking to the 29th General Assembly Session in 1974 said:

Behavior appropriate to an era of dependence must give way to the new responsibilities of an era of interdependence. . . Developing and developed countries, market and nonmarket countries--we are all part of one interdependent economic system. (September 18, 1974.)

Many Third World countries are critical of this line of reasoning, as I shortly will recount. Even so, in their "Declaration on the Establishment of a New International Order," submitted to the April, 1974 UN Special Assembly Session by ninety-five countries and eventually passed, the "reality of interdependence of all the members of the world community" was clearly acknowledged, given the fact of

close interdependence between prosperity of the developed and the growth and the development of the developing countries.

U. S. awareness of interdependence grew throughout the 1960s as trade and monetary issues increasingly preoccupied policymakers. That awareness escalated in 1973-74 with the oil embargo and four-fold price hike. As other resource crises looked increasingly likely, predictions were made of comparable global crises arising from raw material scarcity, enormous payments imbalances, and other stigmata of a helplessly interdependent world.

Few would disagree that the recent energy crisis and associated resource scares have raised profound and disturbing questions about the future stability of the international economic system. Even without the commodities themselves being denied, some have feared that the political-psychological shockwaves might, in the words of the UN Secretary-General, provoke "defensive deflationary measures in deficit countries that could reverse growth trends of two decades and set the world on a depression course."⁴ Yet all interdependent relations are not by definition crisis prone. The system as a whole has at least some

⁴"Study of the Problems of Raw Materials and Development," Note by the Secretary-General, UN Doc. A/9544/Add. 2, 12 April 1974, p. 5.

resiliency and flexibility, else it could scarcely have endured the shocks--past, present, and "future"--of recent years.

A few examples of current trends in the international economy highlight the picture of global interdependence; doubtless other data could also be adduced to illustrate the trends. These are presented here for illustrative purposes only.

(Professor Choucri discusses petroleum and alternative energy sources in Volume II; some data on nonfuel resources appear in the Appendix to this volume.)

1. Food

The role of the United States as the major supplier of food in international markets is expected to expand. The dependence of the lower income countries on food imports is expected, by 1985, to be nearly double the 1970 level. These two projections add up to heavy dependence by the developing countries on the United States as a supplier of food,⁵ even though the major markets for U.S. food are Japan, Canada, the Netherlands, the Federal Republic of Germany, and the U.K., in that order. Between a quarter and a third of land being cropped by U.S. farmers depend on export markets.⁶ Exports in 1972-73 included 72.3% of the wheat crop, 20.5% of the feed grains, 42.3% of the cotton, and 61% of the rice.⁷

Three times since World War II world food demand briefly outpaced supply and there were predictions of permanent world famine. So far, each of these periods has been followed by food gluts; the production response was so rapid that U.S. surpluses quickly developed and prices fell. Inflation could of course keep costs up despite greater supplies--as could continued years of poor harvest.

⁵Lyle P. Schertz, "World Food: Prices and the Poor," Foreign Affairs (April 1974), p. 518.

⁶International Economic Report of the President, transmitted to the Congress, February 1974, p. 52.

⁷Ibid., p. 55.

2. Trade

The volume of world exports has doubled every eight years since 1945, and in the 1960s, when world production rose by 5% annually, world trade grew 8% a year; in 1973 trade volume rose 15%.⁸ The U. S. economy has moved from near self-sufficiency to rising dependence on foreign sources. The Atlantic trading community's share of free world exports rose from 62.5% in 1948 to 70.6% in 1970, but since 1963 U. S. exports to Europe have grown significantly less than exports to Canada, Japan, and the rest of the Western Hemisphere, while the share of total imports of Western European countries from each other increased from 48% to 60% between 1960 and 1972.⁹

Other examples illustrate this trend toward deepening regional economic interdependence. Canada's dependence on the U. S. market has risen to proportions that make for a grave domestic Canadian issue.¹⁰ Japan, which unlike Western Europe and North America trades with no highly industrialized "region," is already the major trading partner of several East Asian nations and may soon become that of others.¹¹

The Less-Developed Countries (LDCs) account for nearly a third of U. S. foreign trade. Despite increases in oil imports, the U. S. trade surplus with the LDCs recently grew by \$1 billion, reflecting a 44% increase in U. S. exports.¹² Eighty percent of the LDCs' foreign exchange earnings come from exports, mostly to the advanced nations, and their annual growth rates are thus highly correlated with growth in rich countries.¹³

⁸Ibid., p. 22.

⁹Ernest H. Preeg, "Economic Blocs and U. S. Foreign Policy," International Organization (Spring 1974), pp. 236-37.

¹⁰Ibid.

¹¹Ibid.

¹²International Economic Report of the President (1974), p. 36.

¹³Robert O. Keohane and Joseph S. Nye, "World Politics and the International Economic System," in The Future of the International Economic Order, ed. C. Fred Bergsten (Lexington, Mass.: D. C. Heath, 1973), p. 155.

3. Foreign Investment

The U.S. accounts for more than half, and, with the U.K., France, and West Germany, over four-fifths of a total estimated stock of foreign investment of about \$165 billion, most of it owned by multinational corporations.¹⁴ In 1968 the LDCs received half as much direct foreign investment as developed countries. The Western Hemisphere attracted about 18% of all direct foreign investment, Africa 6%, Asia 5%, and the Middle East 3%.¹⁵ Recent growth in overseas long-term investment has gone to developed countries. In 1957, 55.5% of U.S. investment went to the LDCs, with 46.9% going to Latin America. In 1968, 58.4% flowed to developed countries, with 31.2% going to Europe, an increase of 11.6%.¹⁶ Between 1950 and 1966 the size of U.S. affiliates in the European community almost tripled; in Japan, the increase was more than fourfold.¹⁷

In a period when domestic corporate earnings have risen about 50% since 1950, foreign earnings through direct investments rose by more than 450%.¹⁸ Although the overall amount of investment is comparable, 80% of U.S. investment in Europe is direct, whereas 70% of European investment in the U.S. is in portfolio form.¹⁹ The U.K., the Netherlands, and Switzerland account for about 60% of the direct investment in the United States, Canada for about 25%. The book value of total direct investment in the United States will be over \$18 billion in 1974, with the 1973 increment more than triple the 1972 figure of \$900 million.²⁰

¹⁴Multinational Corporations in World Development (New York: United Nations, 1973), p. 7. (Hereafter cited as UN MNC Report.)

¹⁵Ibid., p. 9.

¹⁶Richard Rosecrance and Arthur Stein, "Interdependence: Myth or Reality?" World Politics (October 1973), p. 13.

¹⁷UN MNC Report, p. 7.

¹⁸Rosecrance and Stein, "Interdependence," p. 15.

¹⁹UN MNC Report, p. 16.

²⁰European Community, August-September, 1974, p. 9.

4. Multinational Corporations

One-quarter of the GNP of the non-Communist world is earned by multinational corporations (MNCs) outside their home countries.²¹ The value-added by all MNCs is estimated at some \$500 billion; each of the top ten accounted for more than \$3 billion in 1971, more than the GNP of over eighty countries.²² Eight of the ten largest MNCs are based in the United States, which thus accounts for one-third of the foreign affiliates and, with the U.K., France, and West Germany, for more than three-fourths of all affiliates.²³ The U.S. multinationals' production abroad, now five times total U.S. exports, has become in many ways the most important form of American involvement in the world economy.²⁴ However, with host governments now insisting on participation if not outright control, and with growing sentiment for stricter scrutiny, a UN report suggests that the prediction of ultimate domination of the world economy by a handful of giant firms seems no longer justified.²⁵ Others disagree.

Multinationals have tended to concentrate in a few developing countries, in only a handful of which is there a stock of direct investment of more than \$1 billion.²⁶ Among advanced nations Canada represents an extreme case in that foreign corporations account for over one-third of its total business activity.²⁷ (But the essential problem for Canada, as I say elsewhere, is as much psychological--the loss of control over an important segment of Canadian economic life--as it is economic cost, particularly when Canada also places

²¹Rosecrance and Stein, "Interdependence," p. 15.

²²UN MNC Report, p. 13.

²³Ibid., p. 7.

²⁴John Diebold, "Multinational Corporations: Why Be Scared of Them?" Foreign Policy (Fall 1973).

²⁵UN MNC Report, p. 39.

²⁶Ibid., p. 19.

²⁷Ibid., p. 16.

export controls on, e. g., petroleum produced by U. S. -owned companies.)²⁸

5. Nonfuel Mineral Resources

Of the 74 nonenergy mineral commodities essential to modern industry, the United States is now highly dependent on foreign sources for 22.²⁹ Appendix A to this volume, entitled "A Note on U. S. Non-fuel Mineral Import Practices," by Ann Alker, outlines the dimensions of the problem, but the following table offers a quick look at the most acute dependencies.

²⁸Foreign Ownership and the Structure of Canadian Industry (Ottawa: 1968), p. 345, cited in UN MNC Report, p. 43.

²⁹New York Times, December 22, 1973.

U. S. Nonfuel Resource Dependence

(see Appendix for details)

Percentage Currently Imported (estimates vary)	Potentially Self-Sufficient	Potentially Partially Dependent	Potentially Completely Dependent
95%-100%	Manganese	Chromium Cobalt	Asbestos Industrial Diamonds Quartz Platinum
84%-96%	Bauxite		
75%-85%		Mercury Nickel	Tin
50%-55%		Tungsten Zinc	
25%-30%	Iron Ore		
20%-25%			Lead
10%-20%	Copper		

Much of the data just sketched out is of course the basis for assertions that interdependence is a hard fact shaped by the distribution and flows of national resources. But a variety of at least moderately persuasive evidence is also available to support the position that resource dependence can in the long run be minimized, at a certain cost. Apart from petroleum products and alternative energy sources (which Professor Choucrist deals with in Volume II), many mineral substitutions are technically possible at substantially greater costs. For example, large domestic reserves of alunite and anorthosite ores in Wyoming and Utah could replace bauxite in making aluminum. Manganese nodules recoverable from the seabed contain nickel, copper, and manganese. Some users of metal alloys can switch among nickel, cobalt, tungsten, and molybdenite. Corn syrup produces sweeteners which many now use in place of sugar. Recycling could be stepped up to reclaim various crucial metals.

Moreover, some economists recall for us that longer term workings of the market have sometimes generated both new supplies and new technology in unanticipated ways. When the Civil War disrupted the production of whale oil, supply fell far behind demand and the price doubled, generating loud demands for Congress to "do something." Prices were, however, permitted to rise, consumers used less, and new capital began to flow into the development of kerosene and other petroleum products. By 1875 the electric generator was developed, and by 1896 the price of whale oil had dropped to one-sixth of its earlier peak.³⁰ (Some people would not of course accept this apparent indifference to the suffering users of whale oil.)

A modern oil economist reminds us that figures on "remaining reserves" are often of the rolling variety. In 1938, with 5.8% of proven petroleum reserves being extracted annually, and projecting a 7% annual rise in consumption, only about 11 years' supply was said to remain. Thirty-four years later, in 1972, with 2.9% of proven reserves extracted annually and projecting the same demand curve, over 18 years' supply was said to remain.³¹

³⁰Walter B. Wriston, address to Detroit Economic Club, February 25, 1974.

³¹M. A. Adelman, "Foreign Oil: A Political-Economic Problem," Technology Review (March-April 1974), p. 44.

(Some have speculated that futurologists of the 19th century, extrapolating the enormous growth of cities and urban transportation against contemporary technology, might have predicted that at a given point on the growth curve American cities would literally smother under a mountain of horse manure.)

C. Interdependence as a "Good"

If general agreement exists that virtually all countries are caught up in a skein of mutual dependencies we can label interdependence, there is profound disagreement as to whether it is a good thing or a bad thing. Generally, the more asymmetrically dependent, the less enthusiastic.

Current U. S. policy by and large regards interdependence as a positive good. Interdependence, so it is argued, links nations to one another in a network of strands from which none can easily become disentangled. The effect is to foster peaceful cooperation and thus reduce the danger of conflict. A clear statement of this philosophy was made by President Nixon when he asserted that "we can forge a network of relationships and of interdependencies that restrain aggression and that take the profit out of war."³² Secretary of State Kissinger told James Reston that "we have a real belief in interdependence--it is not just a slogan."³³

³²Television-radio address, November 2, 1972.

³³Interview carried in New York Times, October 13, 1974. Kenneth Waltz, who argues that there is less interdependence than meets the eye, wrote in 1970:

"The American rhetoric of interdependence has taken on some of the qualities of an ideology. The word 'interdependent' subtly obscures the inequalities of national capability, pleasingly points to a reciprocal dependence, and strongly suggests that all states are playing the same game." ("The Myth of National Interdependence," in The International Corporation, ed. Charles E. Kindleberger [Cambridge: M. I. T. Press, 1970], p. 220.)

In this view, interdependence is both something that is factually happening, and something to be cherished and fostered. As the twenty-five Inter-American Foreign Ministers pronounced in their 1974 "Declaration of Tlatelolco" after meeting in Mexico City: "Interdependence has become a physical and a moral imperative."³⁴ If that means anything, it means that it cannot be avoided and it is also to be desired.

The major contending policy approaches to interdependence reflect positions which differ from each other not only factually and geopolitically but conceptually. The official view of interdependence held by many in the advanced nations rests on two major conceptual pillars: (1) a primary concern for U.S. (French, etc.) interests, although defined in "enlightened" terms of mutual advantage, and (2) a focus on the reality of contemporary trade and investment patterns, which are increasing among the advanced nations (plus a separate sector of trade with "command economy" nonmarket Communist countries, fostered primarily for political and security rather than predominantly economic reasons, as discussed in the last section).

The official U.S. view accepts as economic facts of life both the preponderant role of the United States and the growing emphasis on "North-North" relations; proliferating worldwide networks of trade, investment, technology, and money are similarly seen as positive goods promising at least some benefits to all.³⁵ This view acknowledges that the system is plagued with irritants that impede the unhampered working of a classic liberal "comparative advantage" economic model of trade and investment. But U.S. officials tend to believe that through appropriate monetary and commercial readjustment mechanisms, the system can be harnessed successfully to a strategy of ever-increasing flows of goods and services across the industrialized world, bringing growth and economic well-being.

Interdependence as a deliberate strategy rests on conceptual foundations with deep roots in Western liberal political-economic philosophy, notably the assumption that world peace would result from an international division of labor based on comparative advantage and a

³⁴February 23, 1974.

³⁵For instance, the MNC is cited in a U.S. Government report as posing no particularly unique problems. International Economic Report of the President (1974), p. 17.

free exchange of goods and services, all presumably reflecting a harmony of pooled, shared interests. One of the 20th century's most energetic proponents of free trade--and of international organization--Secretary of State Cordell Hull, recorded his belief in the theory that "if goods can't cross borders, armies will."³⁶

The policy hypothesis underlying such "inhibitive interdependence" is that it works to restrain unacceptable conduct and to enlarge areas of procedural consensus. A whole gamut of "functional" international organizations were designed at least in part with the belief that political integration and world community-building would "spill over" from processes of cooperation among nations on matters of trade, technology, and the provision of common services such as mail, ocean rescue, epidemic control, and space communications. More than a few liberal internationalist-minded Westerners regard interdependence as a desirable halfway house between the narrow and eventually unsuccessful unilateral route, and the never-never land of supranational integration.³⁷ They view it as both an inevitable consequence of technology-driven economics, and as a good move toward greater international unity through accelerated functional cooperation.

Deliberately opting for a strategy of interdependence needs to be distinguished from what might be described as "natural" interdependence. Interdependence in its sense of mutual dependence does not have to be invented if it occurs between neighboring countries, or between traditional supplier of raw materials and producer of finished goods, or even between those pairs like Japan and Indonesia, the Soviet Union and Poland, or the United States and Brazil where, for better or worse, the partners over time became dependent on one another in a trading or security relationship growing out of readily understood needs or concerns. But different from this is what might be called "optional interdependence" which is deliberately created as part of a larger strategy of reducing tension and creating a desirable world order.

Three varieties of "optional interdependence" come to mind. One is a concomitant of the quest for larger political designs, such as

³⁶Cited by Richard N. Gardner in "The Hard Road to World Order," Foreign Affairs (April 1974), pp. 567-68.

³⁷The theme is nicely spelled out in Herbert J. Spiro's address entitled "Interdependence: A Third Option Between National Sovereignty and Supranational Integration," Montreal, August 14-25, 1973, pp. 6-7. Professor Alker discusses the relevance of integration theory in Chapter II.

the effort to bring about further integration in Western Europe. The Soviet strategy of creating an integrated COMECON bloc used economic interactions both to strengthen the Soviet economy and to tie together the security belt in Eastern Europe.

"Optional interdependence" can also be pursued for shorter range purposes of strategic advantage, ideological gain, monetary relief, counterbalancing, or diversification. Examples would be the Soviet alliance with Cuba starting in the early 1960s and more recent U. S. economic démarches to Poland and Romania, as well as the possible element of mutual dependence now being deliberately created between the United States and Egypt and, increasingly, other Arab countries for diverse political, economic, strategic, and ideological purposes on the part of both. Perhaps, in time, renversements des alliances can be anticipated on the part of additional states who use détente to readjust superpower dependencies that had become onerous.

A third variety of positively sought interdependence aims to reduce tensions between antagonistic parties by acting out the Benthamite-Ricardian hypothesis of peace through economic interdependence. A recent example is the apparent reversal of Iranian-Indian hostility; their rapprochement was sealed in May 1974 with today's coin of the realm--oil. The latter is to go on concessionary terms to petroleum-starved India, and one can only speculate that on the other side of the equation, in addition to greater Indian tolerance of Pakistan, Iran was granted, if only tacitly, that other rare currency--acknowledgment of regional geopolitical hegemony. (The ephemeral nature of such bargains was illustrated only a month later when India detonated a nuclear device at least in part to assert her own hegemonial character.)

Doubtless the most significant contemporary example of a positive strategy of creating mutual dependency is U. S. -Soviet relations, where interdependence has been regarded in recent years by Americans in positions of authority as an option to be consciously chosen between unwanted confrontation and unattainable friendship. This strategy is explained in terms of creating vested interests on both sides and deeply involving both in the linkages that result.³⁸ Trade induce-

³⁸As Seyom Brown recently articulated this kind of approach: "The objective should be to create on the world scene the dense interlinking and crosscutting of communities that prevents extreme polarization and civil war within the more stable domestic societies." New Forces in World Politics (Washington, D. C. : Brookings, 1974), p. 209.

ments in the form of most-favored-nation treatment and Export-Import Bank credits are linked to improvements in political relations; the costs to each side of reversing course are then assumed to mount significantly as time goes on.

Historical evidence exists to support the hypothesis that increasing the volume of shared transactions and common tasks can erode hostility and even strengthen integrative tendencies³⁹(although integration theorists lost their confidence about the workings of this process when post-war Western Europe failed to integrate). If Marxists occasionally give history a helping hand by accelerating the dialectical process, so liberals seek to create a process of interdependency that will make détente irreversible.

Some doctrinaire ideologues on the Soviet side warn obliquely of too much entanglement (as do some Western counterparts).⁴⁰ But the dominant posture in Moscow, as in Washington, is one of fostering interdependence. The reasons could not be more compelling, forming as they do part of a larger shared strategy of reducing the chances of nuclear war. An American reporter recently cited Soviet officials in private conversations as perceiving interdependence as positive for basic security reasons. He quoted them as saying: "We are discussing large, long-term joint economic ventures with the United States and other Western countries that will create an interdependence that we would not want to risk." In other words, "we want to make it virtually impossible for us to revert to hostility even if the costs of detente should become at least significantly higher than they are today."⁴¹ An Eastern European Ambassador to the United States was recently more explicit, arguing privately that it is an "interdependent world" in

³⁹A pioneering study along these lines with illustrative cases was Karl E. Deutsch et al, Political Community and the North Atlantic Area (Princeton, N. J.: Princeton University Press, 1957).

⁴⁰Marshall D. Shulman interprets some current Soviet writings as arguing that "the abandonment of autarky opens the way to a fatal dependence upon the capitalist countries, that the bid for foreign trade and investment is unlikely to be productive, that the operational effects of a detente policy will weaken the Soviet system at home." "Toward a Western Philosophy of Coexistence," Foreign Affairs (October 1973), p. 47.

⁴¹Seymour Topping from Moscow, New York Times, December 13, 1973. Emphasis added.

which the political situation interacts with the economic. If America's Western European allies resist explicit linkages between trade concessions and U. S. defense policy (see below), Moscow clearly embraces such linkages.⁴²

The current pro-interdependence strategy is not without critics who have noted the failures in early "functionalist" arguments for European integration and international political cooperation in general. The Economist, for one, finds unconvincing "the argument that, through the exchange of goods and technology, Russia and America will develop mutually binding interests."⁴³ As I said above, there is only partial historical evidence of success in pursuing a deliberate strategy of interdependence. But given the unacceptable risks in permitting U. S. -Soviet relations to drastically worsen, there seems every justification in pursuing U. S. -Soviet interdependence as a political imperative, undergirded with at least as much empirically demonstrated success as most policy strategies for relatively novel situations.

D. Interdependence as a "Bad"

For some spokesmen of the underdeveloped world, as well as for many Western intellectuals whose analysis and sympathy converge on this point, interdependence along present lines is deemed nothing short of evil. In their view, "interdependence" is a code word for continued dependency of Third World countries on the industrialized North--a

⁴²Shulman cites an article in Izvestia in February 1973, entitled "The Logic of Coexistence" by Vladimir Osipov, who wrote of a "whole new series of new factors in the life of the international community of states which now speak for all-around cooperation," and concluded that "the global nature of the interdependence of states makes anachronistic foreign policy concepts of former centuries based on the opposition of some countries to others and the knocking together of military alliances." "Toward a Western Philosophy of Coexistence," p. 48.

⁴³April 20, 1974, p. 15.

relationship they regard as neither inevitable nor good.⁴⁴ Or rather, it is inevitable only so long as the West, led by the United States, resists emancipation of their countries from what they charge is an international system of economic bondage.

This asymmetry in perspective about interdependence lies beneath the surface of global debates about the future. Given its relevance to the future flow of raw materials as well as to the stability of the international system, it can be brushed aside as an irritating "radical" deviation from accepted conventional wisdom only at our peril.

The critical position, simplified for brevity, rejects not only Western strategy but many of the values informing it. Its dominant pillars are (1) primary concern for redistribution of the world's wealth to the Third World on grounds of equity, social justice, and "economic democracy," all seen as negated by the ever-widening gap between affluent and poor societies; and (2) preoccupation with relations between North and South, particularly the terms of trade, the role of the multinational corporations, and the continuing "dependency" character of the overall economic relationship.

A further dimension of the "ideological parallax" between the sides in this argument is (3) their choice of very different assumptions about the nature of the societies in the Third World.

Those who argue for the benefits of MNC activity in the LDCs⁴⁵ cite the benefits to recipient countries such as transfer of technological skills, increased goods and services, training of an indigenous technocratic class, and so forth. But the critics of Western versions of "interdependence," while sometimes conceding elements of this, nevertheless see little or no gain for the masses of people in the LDCs, as opposed to the elites who are further enriched. In this sense they dispute the very conceptual foundation of Western policy, which at least rhetorically treats LDCs as unitary actors, and assumes that

⁴⁴Professor Choucrist's analysis in Volume II indicates that oil-producing LDCs take a diametrically opposed position, positively valuing their mutual dependencies with the advanced nations.

⁴⁵For example, John Diebold in "Multinational Corporations: Why Be Scared of Them?" (Diebold predicts that MNCs will be the vehicle for the transfer to LDCs of manufacturing industries over the next two decades.)

trade and aid go to a given "country." On the contrary, they see the process of economic interaction as occurring between transnational elites, one at the "center," the other at the "periphery," who operate exclusively to each other's benefit while leaving the masses relatively poorer and more frustrated than before. (Professor Alker details in Chapter II those controversies as found the scholarly literature.)

The shorthand used by many critics to describe the existing global economic system is "imperialism" or "neo-imperialism." Some among them indict "interdependence" as, at worst, a U.S. trick to cover up and perpetuate injustice, at best a policy system producing unintended consequences. See, for example, this statement by the senior Chinese delegate to the U.N. Special Assembly Session in April 1974:

Moscow's imperialist fallacies are even more undisguised than the so-called "interdependence" advertised by the other superpower, which actually means retaining the exploitative relationship.⁴⁶

This Chinese position resonates with the more extreme LDC point of view as expressed in the statement submitted by the Afro-Asian People's Solidarity Organization with membership in 86 countries. In the "struggle for economic independence of the Third World countries" it is essential to

. . . eliminate the dependent situation of the developing countries in the system of world capitalist division of labour.⁴⁷

Some Western critics apply to the North-North advanced nation relationship a comparable critique. "Interdependence" here is also regarded as a pejorative, concealing in this case a more subtle form of U.S. dominance. Two writers thusly describe trans-Atlantic relations:

⁴⁶Deputy Premier Teng Hsiao-ping, April 11, 1974.

⁴⁷UN Document A/9553, 25 April 1974.

. . . we have become addicted to the rhetoric of a specious internationalism which uses "interdependence" as a euphemism for imperialism. Given our post war position of hegemony, an ideology stressing "outward-looking" transatlantic interdependence, and denigrating "inward-looking nationalism" is transparently convenient for imperialist purposes.⁴⁸

To such critics, interdependence in U.S.-European relations has meant relentlessly reinforcing the "faltering military alliance with increasing economic 'interdependence.'"⁴⁹ Including Japan as well, they conclude that "in practical terms, interdependence has meant the perpetuation of America's post-war economic and political predominance."⁵⁰ Much the same is being said by Canadians. Clearly, here too the word "interdependence" has come to symbolize the underlying tension between expanding U.S. capital and markets on the one hand, and the uncomfortable sense of penetration and vulnerability experienced by U.S. trading partners in the process. This is hardly a new allegation, or a new quarrel. France under de Gaulle led the way in exhorting developed Europe to pursue national autonomy in order to avoid capture by American multinational enterprises with their accompanying erosion of cultural identity and sense of national self.

It is therefore not surprising that "interdependence" became a contentious code word in recent efforts to negotiate a "joint declaration" between the United States and the European Economic Community. According to the press, the U.S. draft stated that American-European relations "in all spheres are mutually interdependent."⁵¹ But European neo-Gaullists (not all of them French) preferred notions such as

⁴⁸David P. Calleo and Benjamin M. Rowland, America and the World Political Economy (Bloomington: Indiana University Press, 1973), p. 7.

⁴⁹Ibid., p. 65.

⁵⁰Ibid., p. 251.

⁵¹New York Times, November 9, 1973.

"dialogue" and "independence."⁵² (To this, Secretary Kissinger feelingly replied that "in our view, the affirmation of the pervasive nature of our interdependence is not a device for blackmail."⁵³

Despite the official American commitment to the idea of interdependence, the more that centrist American analysts study the trends and calculate the political costs and benefits of specific dependency relations, the more pessimistic their tone seems to become. Former NSC staff economist Fred Bergsten, for instance, wonders about the purported benefits of further interdependence through trade liberalization:

Groups . . . who feel they are paying for the benefits derived by others from international transactions seek to reject international interdependence. Conflicts between nations as they pursue competing internal goals thus become ever more likely.⁵⁴

On the international political side, it is not clear that harmonious inter-country relations are now promoted by reducing international economic barriers. Indeed, new liberalization could even intensify political frictions, especially between countries which have had very little economic interchange (such as the United States and the Soviet Union or China).⁵⁵

A leading student of technological change also foresees sharpened tensions through interdependence:

The old belief that growing interdependence among nations would breed at least a sense of common

⁵²James O. Goldsborough, "France, The European Crisis and the Alliance," Foreign Affairs (April 1974), p. 543.

⁵³Speech to Pilgrims of Great Britain, London, December 12, 1973.

⁵⁴The Future of the International Economic Order, p. 5.

⁵⁵Ibid., p. 14. But in arguing for the Trade Reform Act, Secretary Kissinger saw one of the principal problems as "the unwillingness of too many nations to face the facts of interdependence." December 3, 1974.

purpose, and more hopefully a genuine community of values, has proven a weak reed at best. Unexpectedly rapid growth in the relations of dependencies across national borders has not reduced strife, but rather sharpened divisions and distinctions. . . . Increased openness and interconnectedness has led to sharpened disputes, breakdown of consensus within nations with regard to external objectives, multiplication of nations and national interest groups, and politicization of an ever-larger number of issues.⁵⁶

And a former Defense Department official, appealing for less strategic interdependence, claims that rather than solving problems, interdependence creates them:

Interdependence creates the need for more world order--the authority to restrain and dispose--without creating order itself. Indeed, it diminishes the effectiveness of the existing degree of world order, which might be barely viable only because it is relatively unstressed. In short, interdependence, which is widely mistaken for part of the solution, is acutally part of the problem.⁵⁷

Functional linkages harbor "problems that could be aggravated to the point where they become threats to the security of nations, demanding, not suggesting, solutions."⁵⁸ Growing nationalism might have been expected to reduce interdependence; yet not only does it not decline, but "aggressive nationalism may lead to higher negative interdependence."⁵⁹ (In his inaugural address, President Carlos Andrés Pérez of Venezuela

⁵⁶E. B. Skolnikoff, "Growth: The Governability of Complexity" (Cambridge: M. I. T., Center for International Studies, 1974).

⁵⁷Earl C. Ravenal, "The Case for Strategic Disengagement," Foreign Affairs (April 1973), p. 514.

⁵⁸Ibid., p. 512.

⁵⁹Rosecrance and Stein, "Interdependence," p. 5.

called for a new oil policy that would be both "national and nationalistic.")⁶⁰ All are arguing--correctly--that relations can get overloaded.

There also is ample historical evidence to support the contention that "interdependency" which is really one-sided dependency may increase the possibility of conflict. Lord North's repressive and unilaterally advantageous colonial economics helped precipitate the American Revolution. Japan's mounting dependency on U. S. aviation gasoline, scrap metal, and oil imports, unbalanced by any reciprocal dependency (not to mention political trust), apparently accelerated the Japanese drive toward imperial war in 1940-41. And the interests of British and French investors and shippers in the operation of the Suez Canal were the precipitating factor in bringing on the 1956 war, given the fact that those governments held in their power nothing of comparable value to Egypt. In this sense mutual dependency can be viewed as the giving and receiving of hostages to one's continued good behavior; here too, "deterrence" all too easily fails if only one side holds hostages.

The energy crisis of 1973-74 raised awareness of mutual dependencies to an acute pitch.⁶¹ Logically, the biggest surprise of the Arab oil embargo of 1973-74 (apart from the widespread leakage) was the lack of any serious threat of military response by powerful consumer states. In that case the hostage was simply too valuable to risk storming the place of confinement, given the lack--then--of countervailing hostages.

But continued one-sided oil relations could unravel the system. As a recent Ford Foundation energy report pointed out, pressures to increase exports and reduce imports for the purpose of generating higher foreign exchange earnings to pay for oil could cause erection of trade barriers, undercutting of export industries, and eventual decline in per capita output along with a rise in unemployment.⁶² Wars have come from less.

⁶⁰New York Times, March 13, 1974.

⁶¹As documented by Professor Choucri in Volume II.

⁶²Exploring Energy Choices, A Preliminary Report, Energy Policy Project of the Ford Foundation, 1974, p. 18.

In sum, the process of interdependence may in fact escalate tensions over loss of national and societal autonomy, and bring defeat of national social and economic goals along with virulent nationalism and eventual conflict. Little wonder then that, even apart from Third World critics who oppose Western versions of economic interdependence as the enemy of autonomy and equality, some representatives of what might be called the "liberal nationalist" position both in the United States and among its closest allies have begun to take an increasingly jaundiced view of interdependency's negative costs, real or perceived.

It should be added that their ranks were increased, at least temporarily, by the President of the United States when, on November 7, 1973, he launched "Project Independence" aimed at securing for the United States precisely the kind of autonomy and freedom from external control by capricious or rapacious trading partners to which on other fronts much of the Third World aspires--both probably unrealistically.⁶³

E. Interdependence as Perception

This brings us to what may in the end be the most important single dimension of interdependence: How it is perceived. For the figures on flows of dollars, goods, or services do not always show which party in a relationship is most affected by the costs entailed.

A minor change in the price of coffee seems marginal to Americans but devastating to Brazilians. Quadrupling posted petroleum prices is enormous in monetary terms but has little affected the average American driver. A negative balance of trade has far more effect on Japan, which depends on us for 30% of the mutual \$15 billion trade, than on the U.S., which depends on its share for only 10% of its total.

Neither dollar costs nor trade flows, then, take sufficiently into account the important part played by "nonrational" factors. This is because interdependence goes beyond simple rationality, beyond any

⁶³Secretary Kissinger's exegesis softened the impact of Project Independence by describing it as "a way-station on the road to a new Project Interdependence." Department of State News Release, February 11, 1974. But President Ford reiterated it as a goal in his address to Congress, August 12, 1974. If done in a balanced way it could bring substantial benefits. See Chapter III.

straightforward calculus of quantitative costs and benefits. You are dependent if you think you are; you are dependent if you feel dependent. Japan is vulnerable in the sense of depending on imports for 99.7% of its petroleum, the United States only for 35%. Yet this observer saw more consumer panic in the United States than in Japan at the height of the recent embargo. Similarly, depriving North Vietnam of petroleum and other basic supplies through bombing and blockade was based on the model of a vulnerable, fragile, consumer-oriented industrialized society. But it turned out that the North Vietnamese were willing to do without--another way of saying they were willing and able to pay the cost of foregoing such benefits.

Sensitivity and vulnerability cannot be measured only by means of statistics. The way people feel about their sensitivity and vulnerability is going to be as influential in defining the interdependent relationship as the actual amount of external activity, or the dollar costs and benefits of opting for one market, one supplier, or one ally rather than another.

A major question for policy purposes thus has to be: "To what extent are you interdependent (meaning 'to some degree dependent') if you think you are, apart from objective facts?" And, if you subjectively think you are, to what extent might you then make self-fulfilling policy prophecies that could generate possibly undesirable consequences?⁶⁴

Questions of this kind are very familiar to students of strategic deterrence; the reasoning may not be all that different in calculating

⁶⁴Herbert J. Spiro in "Interdependence: A Third Option," usefully distinguishes between "conscious" and "unconscious" awareness of interdependence. Conscious awareness of interdependence is "... expressed by politicians, businessmen, educators, and others including the common man when they speak of the direct or the mediating effects of their actions upon others, and of their expectations that the reactions of these others will in turn, directly or indirectly, affect themselves. Unconscious consciousness of interdependence manifests itself through behavior from which we can reasonably infer that it has been undertaken in an 'internalized' kind of awareness of the probability of its repercussive effects upon oneself, which will be transmitted through the various overlapping networks of the polity, of which one perceives oneself as a more or less integral component part. (pp. 3, 25.)

the equation of nonmilitary independence. A nation (such as ours) that in 1973-74 felt threatened by its future dependence on Gulf oil, even when present dependence was in fact quite marginal, tends to act on the basis of a perceived rather than a present condition. It might be inclined, on the basis of the not-yet-real-but-alarmingly-perceived future dependency, to take steps that could create otherwise unlikely structural changes in domestic industry and in trade flows, causing price instabilities, and producing the political consequences of autarky that might or might not have flowed from the objective conditions of dependence.

The liberal tradition (and the official U.S. view) argues that perceptions of interdependency may inhibit violent behavior. But perceptions of dependency can clearly generate insecure feelings, with potentially explosive security consequences. It was in this spirit that the Comptroller General of the United States recently reported to the Congress a retroactive definition of national security:

Although we imported 35 percent of our petroleum in mid-1973, numerous Government studies have concluded that reliance on insecure foreign sources for more than 10 percent of our oil endangers national security.⁶⁵

To take another example: major policy changes might (and perhaps should) flow from the current expectation of worldwide shortages of foodstuffs which, like oil, have suddenly acquired much greater foreign policy saliency. Demand is obviously rising; but the perception is also of a highly volatile supply situation. Yet in the words of the latest annual report of the U.S. Council on International Economic Policy, "actually the real [food production] situation tends to change much less than the public perception of it."⁶⁶ Another example of the subjective phenomenon is Canada which, as part of its larger identity

⁶⁵"Issues Related to Foreign Sources of Oil in the United States," January 1974, p. 16.

⁶⁶International Economic Report of the President (1974), p. 55.

problem, is obviously bothered by its deep interdependency with the United States, but in objective terms may be less affected by it than, say, Brazil or Israel,⁶⁷ which lack Canada's capacity for self-sufficiency.

The gloomy conclusion is perhaps warranted that each nation is trapped in its own ethnocentric perceptions of the world. Each is likely to define interdependency in a way that overlays straightforward facts with belief, sentiment, fears, hopes, and other subjective projections of its own outlook. The bare facts of international interactions may be universally accepted as statistically valid, and the networks they reflect may all add up to something that can be universally described as "interdependency." But to each policy-responsible group, those same interactive relationships will be defined in terms of how dependent each feels, and how dependent on itself each perceives others to be. Like strategic deterrence, the game is played out on the basis of educated guesses about how others perceive the reality one sees. Yet even those educated guesses are vitally affected by the guesser's own conscious and unconscious biases, ideology, cultural style, and political hangups. These can be changed only if clearly identified.

Related to this is a subtler point: I refer to the well-known psychological dependence of the giver on the recipient in some asymmetrical relationships. Quite often the seemingly dominant nation is, paradoxically, psychologically dependent on the one helped. In a curious way, the former's sense of worth or of mission may come to depend on the willingness of the lesser partner to continue to request help, aid, or protection. The United States has experienced this phenomenon in recent years, much as other great powers did in their day. Foreign aid, for example, can in the end only be justified to Americans by satisfaction in helping others, rather than visible national advantage.

In sum, even if asymmetric dependence is an illusion, it still matters very much how it is perceived, for (as with all human behavior) the perception is what will be acted upon, and is thus as much of

⁶⁷As an Israeli official recently told correspondent Terence Smith, "No one likes to be completely dependent on one friend, no matter how close a friend he may be. We are vulnerable and we know it." New York Times, June 16, 1974.

a "reality" as the objective situation.⁶⁸ The statistical data on economic interdependencies is assuming torrential proportions; but the implications of perceived interdependency are profoundly under-researched. Yet this may be one of the few areas where there is a good fit between the behavior of nations and that of individuals. So important does it seem for a better understanding of the contemporary interdependence problem that I have asked a psychiatrist with professional qualifications in international relations to sketch out some of the possible parallels and point to any usable lessons for policy. (See Appendix B.)

F. Interdependence as Balance

It appears incontrovertible that, for mutually satisfactory international relations, what matters most is the degree to which interdependent relations are (or are perceived to be) symmetrical or asymmetrical. If a given relationship is in balance, in the sense of each party being equally dependent on the other, it seems reasonable to hypothesize that such a relationship is more viable and stable than if it were asymmetrical. The exception seems to be the case where one or the other feels "overloaded" with mutual interdependency (as Canada seems to feel), and prefers to be more autonomous, less vulnerable, in short less dependent. If the relation is truly symmetrical, the costs to each of denying things of value to the other are comparably high (or low); in effect, both are equally deterred from unilaterally damaging the relationship (or, in more positive terms, mutually motivated to foster it).

The key, then, is asymmetry. We then ought to try to identify what might be called the "deficit" in any given relationship, that is, the gap between mutual, reciprocal, and balanced dependence on the one hand, and the imbalance that may actually exist (or is perceived to exist--what might be called the "psychological deficit").

It is a commonplace how extensively other countries find themselves to be dependent on the United States; even where the United States is highly dependent on others for a variety of benefits (see below),

⁶⁸As William Diebold, Jr., recently wrote of international economic affairs, "thinking makes it so" more often than is generally realized. "U.S. Trade Policy: The New Political Dimensions," Foreign Affairs (April 1974), pp. 472-73.

the dependency of some major foreign consumers on U.S.-grown food mightily counterweights the balance. So does continuing dependence of some 40 nations on U.S. defense guarantees. A newer case of dependence on the U.S. grows out of foreign corporations operating on American soil, which in 1972-73 entailed an investment of a billion dollars. In general, given the astonishing diversity of American products and activities, the U.S. generally seems to have more options than most other nations (in dramatic contrast, for example, to Western European and Japanese dependence on imported oil, or--equally dramatic for Japan--to the most recent "shokku" growing out of dependence on U.S. soybean exports for the Japanese daily diet). The Soviet Union is more economically self-sufficient than most; but Soviet policy seems importantly conditioned by its need for U.S. high technology as well as credits and foreign exchange. Options in this sense measure power.

But except for the drama of petroleum dependency, U.S. dependencies on others are not so readily observed, or acknowledged. Exports are without question crucial to American agriculture and to millions of jobs in the U.S. economy (although it must be said that in 1968 the U.S. only exported 4% of its GNP compared with 10% of Japan's, 14% of Britain's, and 12% of West Germany's). Imports are also critical to the American economy, given the present deep external dependency on petroleum and nonfuel mineral resources (although product substitution or demand reduction strategies could in time lessen the dependence).

The balance sheet is thus somewhat ambiguous. But some specifics are unequivocal. U.S. dependence on other advanced nations is overwhelming for trade, mutual security, and technological innovation.⁶⁹ In terms of balance of payments, there is no disputing our reliance on investments in Canada, Europe, and Japan for corporate profits. And

⁶⁹Many products and processes first developed abroad, such as oxygen process steel, jet engines, and continuous casting to float glass, as well as high technology developments such as electronic micro-circuitry and atomic research, have benefited the U.S. economy and generated further innovations by U.S. firms, leading the Administration to conclude that "For its own benefit the United States should continue to encourage the international flows of technology." International Economic Report of the President (1974), p. 72.

possibly most important of all, because it is dependent on the Soviet Union and the Chinese People's Republic not to raise their level of hostility, this country in its relations with non-Communist countries will often pay a high price for mutual security arrangements even if it is "ahead" of those countries in some major economic sectors.

U.S. dependence on the Third World includes not only resources, but also profits from investments which add over a billion dollars a year to U.S. balance of payments. In addition, this country is dependent on reasonable prices for resources we import. The LDCs can be seen as potential U.S. allies in seeking a more stable international monetary system because of their urgent need for access to stable foreign markets. According to the latest report of the President's Council on International Economic Policy, "our objectives in the areas of trade, investment and monetary reform can be jeopardized if the poorer countries are not brought into successful participation in a more open world economic system...." (p. 20.)

Finally, it seems not unreasonable to enter some noneconomic factors into the balance sheet. For instance, to an extent U.S. social health is dependent on Turkey not to grow opium poppies, on France not to process the opium, and on Mexico not to act as a transfer point. And certainly in a general sense the United States for three decades regarded itself as dependent on the Third World's stability and resistance to Communism. What we regarded as a lack of stability in Third World areas virtually dominated U.S. foreign policy for the last two decades, sometimes involving dangerous potential superpower confrontations, along with high costs to the American social and political order because of interventions in Third World conflicts.

If one had to sum up the overall picture, the reality of our world is that most nations, including the U.S., are inextricably enmeshed in a web constructed of nuclear deterrence, ideological and political struggles, imports and exports, raw materials for energy and manufacturing, and the monetary system to pay for international trade. Proliferating linkages are encouraged by the ease of transport and communication, and the whole system is kept unpredictable by the dynamics of technological innovation and socio-political change.

Regardless, then, of marginal advantages and disadvantages, the reality is of a highly fragile, sensitive, and vulnerable global system, with equally fragile, sensitive, and vulnerable subsystems including

states, corporations, regional, subregional and functional sectors, all containing units to a greater or lesser extent dependent on each other for their individual well-being. Analysis of the degree and intensity of that "greater or lesser" dependency is critical for policy purposes.

At one extreme, where are found the poor countries of the Third World, few would quarrel with the conclusion that, on balance, the economic relationship is acutely lopsided in favor of the affluent nations who enjoy multiple options and multiple cushions--or the conclusion that the strategic value to the United States of most of the "LDC world" is dwindling.

Nor is the degree of symmetry of the mainly strategic U. S. -Soviet interdependence hard to discern. That relationship is so symmetrical at the strategic level (despite rhetoric on both sides) that a successful economic interdependence strategy can be regarded as a dividend rather than the prime factor. Of course as trade and investment expand, and if détente matures into more genuine mutual confidence, then (as in Western Europe) economic factors could come to represent central rather than marginal elements of the relationship, and deficits--real or psychological--could come to dominate the East-West relationship. That time is not yet here.

The most difficult problems for policy analysis arise neither from one-sided LDC relationships nor basically "optional" super-power ones. They arise from the relationships which combine delicately balanced sectors of economic intercourse and military security. For purposes of policy analysis it is highly desirable to be able to calibrate and balance the net effect of these "across-sector" dependencies, and to isolate any "deficits" which make the interdependence asymmetrical (or appear to be).⁷⁰

To do so is not as easy as it may seem. It is a manageable task to sort out the relative dependencies that fall within one sector, say petroleum or trade, or even general economic (trade plus investment

⁷⁰For purposes of simplification in this analysis, interdependent relations are looked at as two-sided. As analytical tools are sharpened, this can yield subsequently to multiple-actor analysis.

plus aid). (Professor Choucri does that for petroleum in Volume II.) Trade and investment figures can be readily compared; indeed, the deficits in this sector are dramatically exposed regularly in terms of balance or imbalance of trade, or (combining all economic transactions) balance or imbalance of payments on current accounts. And the military security sector lends itself to at least superficial quantitative analysis, e. g., relative number of ground forces contributed to NATO commands by the United States and the European countries, or relative numbers of deliverable warheads or megatons in the strategic weapons "interdependence."

But despite this availability of numbers, the military security sector is quite difficult to measure, since the real balance is calculated in terms of how vulnerable, how dependent, how threatened, i. e., how secure or insecure the parties feel. Worst of all, compartmentalized government operations tend to isolate the relative dependencies in each sector, making it difficult to look at the relationship as a whole.

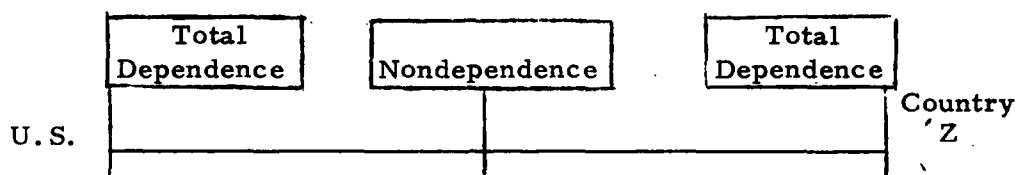
But it is these crucial trans-sectoral interdependencies that yield the overall balance of a relationship. They are undeniably the hardest to "net out." Yet it is only in the "netting out" process that one can define the net balance or net deficit in any given relationship, and only if these are adequately defined can policies be formulated that are in the overall adequate to offset the deficit.

How can the elements of each major sector of interdependency be identified and the balance measured? Assuming for simplicity two sides, each a "unitary" nation-actor, the essential data are (a) the things of value to each side (e. g., protection, resources, trade, stability, etc.) which may be "private goods" enjoyed only by one nation, or "public goods" to some extent enjoyed jointly; (b) the costs and benefits to each side of sustaining the relationship (including opportunity costs); and (c) the relative importance of each sector to each party (including the way their interests coincide or compete). These data can, as suggested, often be quantified, but only in part. Analysis must be both objective and subjective. (See Volume III by Professor Alker on research methodologies.)

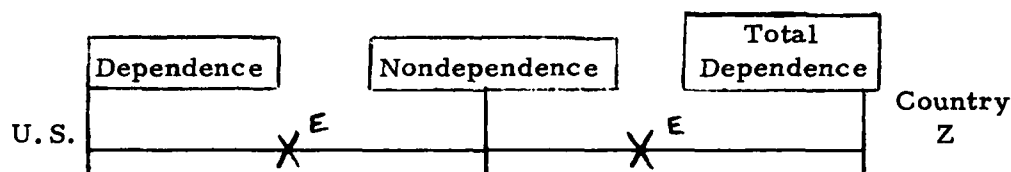
The ultimate products sought from the analysis are: (d) a measure of relative dependency, indicating at least impressionistically the degree of imbalance in the relationship as a whole forming a deficit that may be objectively demonstrable (or may exist in whole or in part in the perceptions of one or both parties). A refined version of this approach should also (e) show the overall importance or unimportance to each side of the combined sectoral relationships.

In very simplified form the results could be depicted on a non-quantitative scale, as a first crude step in identifying potential "deficits."

A nonquantitative index of "net" interdependence might be constructed by first approximating graphically the relative balance or imbalance between parties in each major sector of their relationship. The extent of each one's dependence on the other might be impressionistically depicted on a scale set up along the lines of the following rough outline. The extent to which the parties are symmetrically interdependent would be determined by the placement on this kind of scale:

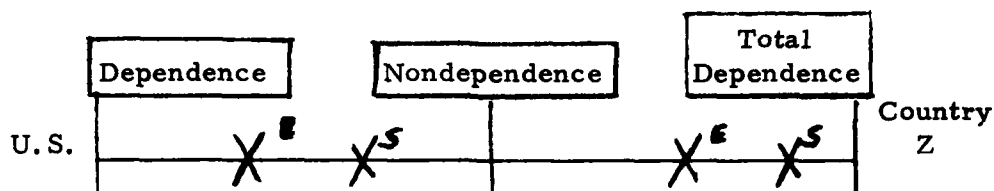


The relationship in each major sector needs first to be calculated in a way that combines the level of benefits for each side with the intensity, in the sense of low or high costs of foregoing such benefits. If this were done with, for instance, trade, the two-way relationship could be crudely shown as follows (other economic sectors could also be depicted):



In this case the United States is fairly symmetrically "interdependent" economically with Country Z, i. e. each is generally as dependent as the other in trade or other economic relations between the two.

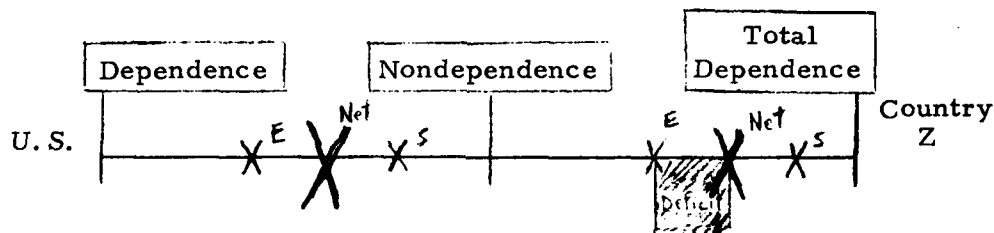
If the relationship is a multi-faceted one (say a military alliance) another major sector, e. g., "security" could be added:



Here Country Z is much more dependent on U. S. military protection than vice versa ("much more" can be defined quite specifically in the economic sector, less specifically in the security sector).

A suggested overall "Interdependence Index" would then show both the intensity of the relationship, i. e., how dependent the two sides are; and also the degree of asymmetry, i. e., how unequal the relation, in each major sector.

A "netting-out" process might show an area of net "interdependency deficit" on one side of the relationship:



Here the "deficit" represents the overall difference in the overall relationship between the "net" point on the U. S. side of the scale and the "net" point on Country Z's side. (It must be emphasized that this approach is merely suggestive for the purpose of visual graphic representation, and not to be taken seriously at this stage as representing true measurements.)

This approach may seem over-mechanistic (not to say over-ambitious) to an official having to deal day-to-day with, e. g., Japanese, Canadian, or Latin American relations. But a net appraisal of, say, U. S. - Japanese interdependence usefully highlights the fact that, despite superficial similarities, it is markedly different from U. S. - Western European relations. Why is this true? An answer to that question should have important implications for U. S. policy actions in both sets of relationships, as well as being usefully suggestive for other relationships as well. Again, all components in the relation must be added up first.

The United States trades extensively with both Japan and Western Europe. Both perceive the military "threat" facing them approximately similarly (i. e., low, but not nonexistent). Yet even a casual probe of both areas reveals far more sensitivity on the part of Japanese than of Western Europeans when it comes to their dependence on the United States for military security. It can be concluded that the U. S. - Japanese interdependency carries a substantial net deficit on the Japanese side that, since it cannot be explained by a very different economic relationship, can be classified as psychological. The United States through trial and error has already learned that this psychological deficit cannot be remedied by marginal changes in the substantive elements of defense and trade. In the longer run it can only be alleviated at the psychological level, by producing a change in how most Japanese feel about the relationship. (Some concrete suggestions along this line are advanced in Chapter III.)

Since Western Europe is also dependent on American military power, why doesn't interdependence with Western Europe seem to be equally burdened with a psychological deficit? One answer is that Gaullism, for all its irritation to Americans, added to the scales a quantum of pride and even arrogance that built up European self-esteem and thus helped to offset the imbalance that arose from objective conditions of defense dependency plus asymmetrical economic penetration. In addition, Western Europe increasingly broke out of the two-way relationship and diversified trade relations, particularly with Eastern Europe and the Arab world. The asymmetry remains between the United States and Western Europe, but has been to a degree diffused with diversification, and offset with morale-building psychology.

To use a very different (but relevant) example, the American economy's dependence on Saudi Arabian petroleum seemed by 1973 to be intensely asymmetrical, with few U. S. -supplied things of value whose deprivation would entail costs for the Saudis anything like the costs Americans would pay if deprived of Saudi oil. When Saudi Arabia led the way in the 1973-74 oil embargo the net relationship was perceived by Americans as so asymmetrical (and thus threatening) that a national crash program of resource independence was announced. There could be no doubt that in the public mind this program was aimed chiefly at reducing reliance on Saudi oil. Projections to 1980 (which usually held everything else constant) forecast future U. S. dependence for one-third to one-half of its total oil supplies. But the fact was that Saudi Arabia in 1972 provided only 9% of U. S. petroleum requirements.

In short, the U.S. -Saudi mutual interdependency gave rise to an American perception of a huge "deficit." But as time passes there is likely to be considerable net balance. For one thing, as Gerald Pollack recently pointed out, "above a certain level, an OPEC decision to export oil is a decision to invest abroad."⁷¹ Substantial Saudi orders from the United States, as well as inevitable portfolio and direct investments here, show that the relationship is potentially more mutual and symmetrical than either side at first perceived. (Volume II elaborates on this point.)

A third instance of asymmetry from which misleading conclusions can be drawn is the U.S. -Canadian relationship. By any gauge of interdependence, these two are the most interdependent countries in the world, measured by alliances, economics, defense arrangements, linguistic and cultural heritage, flow of people, and communications. If integration followed numbers of contacts, the two countries should be moving to a closer political relationship; instead, the reverse is taking place, and attitudes give the impression of worsening.⁷² If this is because of asymmetries, the same asymmetries are present in Europe between the small countries and France and Germany; yet the former are the strongest advocates of a United Europe.

The paradoxes in the U.S. -Canadian interdependency are not easily diagnosed. One hypothesis is that it has crossed a threshold of interpenetration beyond which political-economic units either must merge, or else reduce the overload on the more vulnerable partner striving to preserve its autonomy and culture. The Thirteen Colonies were probably excessively "interdependent" when they broke away from England 198 years ago.⁷³ France apparently felt close to the same threshold in the early 1960s, and chose to reject the option of merger with its Community partners while restricting U.S. capital investments and corporate operations (and, as said, further redressing the asymmetry by adding to its side of the balance a hefty dose of chauvinism).

⁷¹"The Economic Consequences of the Energy Crisis," Foreign Affairs (April 1974), p. 45.

⁷²I am indebted to Dr. Ted Greenwood for this example.

⁷³A comparison I owe to Professor David A. Kay.

The concept of interdependence is clearly valueless if it means everything, if it connotes all contacts, all impacts, all trade, all investment, all tourism, communication, transnational enterprises, diplomacy, strategy, power--in short, all international, transnational, and multinational transactions and relations. It must possess a better conceptual framework if we are to move from the stage of rhetoric, piety, or doom-saying, to the point where planners can see more clearly what are the policy alternatives and strategies appropriate to the problems urgently requiring solution.

If it means anything, interdependence refers to a situation of two-way dependence between states or enterprises possessing things of value to others and thus able to indulge or penalize each other with those benefits. At root interdependence can only be defined by dependence, i. e., reliance on some entity outside one's political jurisdiction for something one needs or values, whether goods, money, services, defense against enemies, a stable political or military environment, or an unpolluted biosphere.

In the final analysis, some of the crucial policy decisions are going to be made by most societies on the basis of a highly subjective criterion, such as the presence or lack of domestic and international tension generated by a given relationship. The measurement of interdependent relations thus at least to a degree must rest on intuition.

Yet the preceding analysis, along with the other parts of this report, hopefully lays a conceptual basis for improved policy analysis of "interdependent relations," a conceptual basis that, with rare exceptions, has been absent from the undifferentiated assertions about interdependence made in recent times by public officials.

CHAPTER II

FOUR INTERDEPENDENCE CONTROVERSIES:
CONTENDING SCHOLARLY PERSPECTIVES

by

Ann Alker and Hayward R. Alker, Jr.

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Analyzing global interdependence involves more than the helpful semantic reviewing of the previous chapter. It means developing defensible ways of answering the analytical questions directly or implicitly raised there: How might many-faceted global interdependence be conceptualized? How should we resolve the issues associated with its measurement and evaluation? What are the relevant trends and their underlying conditions, institutions, causes? What future developments are likely, desirable, undesirable, possible? What policy responses, by whom, in what order, might be taken? What would be their likely outcomes and longer run institutional effects? Which should be advocated?

In order to sensitize the reader to the possible answers to such interdependence questions, the present chapter will review four earlier scholarly controversies for convergent preoccupations and divergent orientations. Why review scholarly controversies? Which ones would be most appropriate? What issues emerge in looking at the appropriate scholarly literature? In answering these questions here, we shall keep in mind our concern with how best to analyze contemporary interdependence questions, e. g., American energy dependence upon the Middle East, to be discussed in the next volume. And we shall provide important background material for the problem specifications, methodological maxims, evaluations, and recommendations of the subsequent chapters. It should not surprise us to find such substantive and methodological concerns interpenetrating each other.

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A. Why Review Scholarly Analytic Controversies?

As Keynes would be gratified to observe, contemporary public debate on global interdependence often crudely reflects earlier academic ideas and language. At the beginning of World War II, Quincy Wright noted contradictions generated by growing, technologically induced economic interdependence and simultaneous political movements toward more absolute sovereignty and a more united global community. He advocated a liberal world order against the perspectives of totalitarian nationalism.

To some the broadening of international trade, evidence of interdependence, means economic vulnerability to be combatted by every variety of artificial barrier--tariffs, quotas, embargoes, exchange controls, etc.--while to others such trade means an economic division of labor, the essential basis for maintaining and increasing the welfare of every people. The economic condition of the world becomes a source of war or of prosperity according as one envisages it through the glasses of totalitarian sovereignty or of an international order.¹

E. H. Carr also wrote expansively and imaginatively about an "intimacy of conduct, an interdependence of welfare and a mutuality of vulnerability" decades ago.²

Anti-Keynesians would note that the international events motivating scholarly research are usually created by public actors responding to their own concrete situations. Further criticizing the illusions of scholarly autonomy and originality, they would expect scholars intensively researching interdependence questions to offer findings and interpretations conditioned by the major political cleavages of the times. In

¹Quincy Wright, A Study of War, 2nd ed. (Chicago: University of Chicago Press, 1965), pp. 366-67. (The first edition appeared in 1942.)

²As quoted in Geoffrey Goodwin's perceptive article, "International Institutions and International Order," in The Basis of International Order, ed. Allan James (London: Oxford University Press, 1973), p. 159.

Quincy Wright's time, for example, nationalist arguments for independence were more exclusively totalitarian claims than they are now. Today we would expect scholarly orientations to be analyzable in terms of well-known left-middle-right and North-South/rich-poor/strong-weak distinctions. Indeed clarified versions of these hypotheses will be restated at the end of this chapter. Even in a time of East-West détente and appeals for global problem-solving, research paradigm cleavages among international relations scholars have many of the same selective perceptions and misrepresentations of perspective characteristic of public diplomacy.³

Nonetheless a cumulative, defensible answer to our key methodological question: "How ought we to describe and analyze currently evolving patterns of global interdependence?" requires attention to contending analytical perspectives. If they are seriously advocated and their findings regularly updated in the light of new events and more powerful research techniques, different perspectives must have something of value. Because the most powerful analytical techniques within a particular tradition are usually those that take the most for granted, the common caution "do not trust an expert" is relevant here. We must not blindly accept derived findings as scientific facts: the assumptions going into their development should be made explicit, and alternatives to these assumptions should be highlighted. Given the layman's difficulty in comprehending such techniques and the results of their application, he too can be helped by a critical reading of controversies among assumption-conscious specialists.

If the evaluation of previous research contributions requires assumption consciousness, the need for such awareness is even greater when choosing among, synthesizing, or designing new research approaches. Recommendations based on tacit or unconscious prejudgments of normative conceptual and empirical questions are not likely to have extended utility in communities where free, critical discussion is positively valued and advocates of different analytical perspectives are allowed to contend. As much as possible, analysts working within a particular perspective should be aware of their own presuppositions and willing to modify them when appropriate. A brief review of contending analytical perspectives toward previously researched inter-

³This argument is illustrated with a detailed case study of arms race analyses by peace researchers and defense strategists in Hayward R. Alker, Jr., "Research Paradigms and Mathematical Politics," forthcoming.

dependence controversies clarifies what alternative orientations are realistically possible, delineates what bases there are for cross-paradigm convergences, and facilitates reasoned choice from among analytical orientations in designing relevant approaches to public issues. It should also help those funding or using research on interdependence to know what they are getting and what they are not.⁴

Finally, such a historical review of analytical orientations may help the policymaker reflect about his own times more richly and more analytically. Policymaking is concretely focused, but it is also heavily based on precedent and sometimes systems oriented. The frameworks within which precedents are conceptualized and the logics of their selection and implementation are as theoretical as most systematic scholarship. Many of the same value questions preoccupy policymakers and social scientists.⁵ Given that scholarly orientations derive in part from the same contexts as those of the politically active--perhaps with longer time spans, broader geographical horizons, but narrower disciplinary boundaries--their conceptualizations, frameworks, and logics may even be useful for policymakers interested in the lessons of the past.

B. Which Controversies Should We Review?

The previous chapter identified three areas central to contemporary American policy discussions about evolving patterns of global interdependence: military security, especially in the light of increasing national capabilities to deliver nuclear warheads; ecological issues involving limited resources, human environments or hard-to-

⁴A convincing case for repeated examinations of analytical assumptions in the State Department context is given in Lincoln P. Bloomfield, In Search of American Foreign Policy: The Humane Use of Power (New York: Oxford University Press, 1974), especially pp.112-23.

⁵The best recent cases for this view are unpublished works by Alexander George and Robert Jervis. See also, Alexander George et al., The Limits of Coercive Diplomacy: Laos, Cuba, Vietnam (Boston: Little, Brown, 1971).

reverse transformations of the biosphere; and political-economic questions about aid, trade, payments, and investments. Each area of concern contained some evidence of growing interdependence, perhaps due to unprecedented population growth, resource needs for development, sensitivities raised by international transactions or technological vulnerabilities. Associated with each of these kinds of interdependence are scholarly literatures rich and diverse in their analytical orientations.

By looking at the major contending analytical perspectives dealing with these different kinds of interdependence, we may learn much of methodological and even policy relevance. Within each literature a more selective strategy is to probe more deeply a single, analytically rich controversy focused around interdependence questions. In following this latter course, care has been taken to read scholarly literatures outside the most prestigious, professionally specialized journals in order to highlight contending orientational positions. This strategy is appropriate because journals are sometimes captured by scholars with narrow editorial philosophies and because disciplines have a way of subdividing when key issues cannot be resolved within them. In such a cross-journal, interdisciplinary review, ill-focused "controversies" should be expected, rather than normal scholarly debate. When differences in assumptions are not directly confronted, they may have to be inferred.

In the security policy area, one finds a rich but controversial literature associated with the development and modification of deterrence strategy. Ecologically speaking, the glut of articles occasioned by Meadows et al. in The Limits to Growth⁶ raises a similarly rich plenum of issues about global interdependence. Among political economists, there is much discussion of a new era of global trade, investment, and payment relationships. Cooper's liberal, autonomy-sensitive, and influential book on The Economics of Interdependence⁷ helped start this discussion in the United States, but European and Third World authors have been writing on the same issues of market interdependence as well.

⁶Donella H. Meadows et al., The Limits to Growth (New York: Universe Books, 1972).

⁷Richard Cooper, The Economics of Interdependence: Economic Policy in the Atlantic Community (New York: McGraw-Hill, 1968).

In addition to these controversies close to the heart of current American foreign policy debates, the literature on European integration is particularly rich concerning interdependence questions. Debates about the gains and losses of more intimate forms of international association have been regularly joined. American scholars hoping to avoid another world war have been fascinated by European experiments in community-building, among the Six or the Nine, across the Atlantic, and between East and West. Those interested in interdependence would probably argue that something more can be learned from this literature without presupposing that European institutional alternatives are the same ones appropriate for the United States. Indeed, there was considerable research within the State Department on this topic in the early 1960's even though it was not identified by Chapter I's review of contemporary policy debates raising interdependence questions. Certainly these arguments provide sufficient reasons for the State Department's original request that integration research be reviewed within the present project.

Our review of each of these controversies is based on four working papers with rich bibliographies.⁸ In the following sections we shall summarize, borrow repeatedly from, and comment on these papers without further acknowledgment.

C. The National Security Debate

One can detect several broad schools in the American literature on security questions. For review purposes these may be broken down into two groups consisting of (1) strategists and (2) their critics, each

⁸Richard Kugler, "Strategists and Their Critics: The United States National Security Policy Controversy"; Ann Alker, "The Limits to Growth Controversy"; Fabio Basagni, "The New 'Political Economy' Controversy"; and Lily Gardner, "Interdependence, Independence, Dependence, and Integration: Whither Western Europe?"

encompassing a wide range of political perspectives.⁹

1. Strategists' Perspectives

The evolution of the national security debate within the strategy community has taken place at two levels: (a) a broad debate over U.S. foreign policy and (b) a narrower debate over U.S. military defense policy.

a. Strategist Thinking: Foreign Policy

Strategist thinking has been marked by a close relationship between academic research and government policy. It is characterized by an attitude of "Realpolitik" where conflict is viewed as unavoidable. Policy considerations therefore should be based on the self-interest of the United States and policy formulation should be conducted by elites through a system of rational choices. Strategists like Bernard Brodie, Herman Kahn, Henry Kissinger, and Albert Wohlstetter would accept most or all of these beliefs, perhaps with certain modifications.

Prior to 1946 it was thought that stability could be preserved through great power cooperation within a framework of collective security, economic recovery, and national autonomy. The failure of this policy due to East-West tension led to the policy of containment, i.e., Western opposition to Soviet expansion, with the result that the United States became increasingly engaged in West European affairs through the 1960s.

Strategist thinking centered on crisis management and alliance cohesion. Collective alliance benefits and the achievement of mutual goals through joint action were pursued by the Allies in the earlier years at the expense of détente: this led to a rise of tensions between blocs and the gradual realization that more attention should be paid to crisis management. Because of this and the high destruction potential of nuclear weapons, East-West relations began to be viewed by most strategists as a non-zero-sum game during the 1960s. Vietnam con-

⁹Morton Kaplan distinguishes "strategists" and "antistrategists" in Strategic Thinking and Its Moral Implications, ed. Morton Kaplan (Chicago: The University Press, 1974). Another compendium with high degrees of controversy and noncommunication but interesting arguments is Strategic Interaction and Conflict, ed. Kathleen Archibald (Institute of International Studies, University of California, Berkeley, 1966). We have felt it advisable further to break down "antistrategists" into clearly distinguishable subgroups.

tributed also to this change in attitude since it was apparent that the United States was paying out of proportion to gains in Third World conflicts.

Debate over strategy options increased as the disillusionment over Vietnam set in, with the result that the so-called Nixon strategy replaced the earlier policy of containment. Its main features, as seen by most strategists, are a global *modus vivendi* under rules of mutual restraint and conduct in a balance of power situation. Western Europe and Japan remain dependent on the United States for protection but take more responsibility for preserving world order. Criticism of this strategy among strategists centers on its "Realpolitik" nature: it is not clear that present trends will or can meet the conditions necessary for classical power balancing relationships.

b. Strategist Thinking: Military Defense Policy

This debate follows closely the political debate and is methodologically more relevant for present purposes. Having dismantled most of the U. S. force following World War II, the Cold War led United States decision-makers in the early 1950s to rebuild American and allied military strength in line with the containment policy.

In the mid-1950s consensus focused on unilateral deterrence, seen as a device to prevent unacceptable Soviet actions. There is a large theoretical literature on this subject. At first reliance was almost totally on nuclear weapons, a doctrine which became known in the mid-1950s as massive retaliation. Since this heavy reliance on nuclear weapons failed to deter the crises of the 1950s, a debate between the proponents of nuclear and conventional forces emerged. Critics of massive retaliation won out, and in 1961 a new strategy, that of flexible response, was adopted. This policy, which continues to rely on second strike nuclear capabilities but also incorporates tactical nuclear forces and conventional forces, is still the basis of U. S. military policy. Debate centers on the constitution of the force and related cost-benefit calculations. Questions such as these have sometimes been solved, with respect to particular weapons systems, using PPBS --an application of liberal welfare economics-- rather than by inter-service bargaining. Higher order questions of the appropriate structure and functions of American and allied military services have rarely led to answers based on clearly stated, consensually supported political objectives.

Recently, however, there has been a change in conceptual framework. Current debate over the Nixon strategy centers on systems design rather than cost-benefit calculations: deterrence is viewed as

mutual rather than a unilateral phenomena, and an interaction factor is recognized. Both sides have the capability to destroy each other and this new way of thinking has led to greater attention to arms control questions. Therefore, growth in U. S. - U. S. S. R. security interdependence has reached a point where deterrence by mutual assured destruction is being supplemented by cooperative ventures in Third World crisis management (perhaps even extending to Vietnam), a reinvigoration of collective security (the role of the UN Security Council regarding Cyprus and the Middle East), and attempts to control the arms race.

2. Critical Perspectives

As scholarly groups, most critics of the strategists were not clearly recognizable until the late 1950s. Their critiques of deterrence theory and doctrine had various intellectual bases, including the game-theoretical ideas frequently used by strategists themselves, behavioral social science, Marxist imperialism theories, and integration-oriented scholarship.

a. Radical Left

One group of the radical left, including Gabriel Kolko, has a basically Marxist interpretation of U. S. foreign policy. The United States is imperialistic, motivated by the search for economic profit and it is structural capitalism which makes the basic decisions. Another group, including Richard Barnet, sees the bureaucratic structure as imperialistic, with its goal of forging a pro-American world order. Both of these groups see deterrence theory as heavily ideological and lacking in scientific stature.

b. Behavioralist Critics, including Peace Researchers

This group rejects the Realpolitik notion that destructive conflict is an inevitable state of international affairs. Its leading members, such as Kenneth Boulding, Karl Deutsch, Anatol Rapoport, and J. David Singer, share a long-term community-building orientation antithetical to many strategists. Rather than blaming the Cold War exclusively on either the United States or the Soviet Union, they see it as an interaction or spiraling of tensions. Research on crisis decision-making frequently suggests that United States leaders have misperceived Soviet intentions, and vice versa. Other research centers on topics such as systems change according to integration theory, the conditions of stable deterrence, social or psychological theories of reaction processes, system-induced violence, and intergroup conflict resolution.

There are frequent alternative systems simulations and expressed fears of superpower condominiums.

Many behavioralists maintain that strategic theory is based on dubious assumptions about rational actors that make it more a doctrine than a science; some have tried to give deterrence more scientifically respectable empirical foundations. Strategists are sometimes told by more militant "peace researchers" that their values are aggressively nationalistic and that they offer no alternative futures of a desirable sort. Among European peace researchers, a version of Marxian class analysis is sometimes considered or used. Like others, it is suggested by less politically engaged behavioralists that the role of scholars should be to seek the truth, dispassionately evaluating government policies, not devising strategies for optimizing these policies. In this view, critical autonomy and an empirical focus necessary for scientific progress will be compromised when scholars work too closely with their governments.

c. Government-Oriented Critics

These critics, for example Graham Allison and Morton Halperin, focus less on substantive policy issues and more on governmental processes: how decisions are made or ought to be made. They usually accept the basic policy framework within which the major policy-making and -implementing bureaucracies work, be it containment, Cold War, or détente. But the unity and identifiability of a rational national interest is doubted. Here may be found much of the recent literature on bureaucratic politics and organizational reform, including the more interesting cases of transgovernmental cooperation among particular military services.¹⁰ Pressure toward implementing a more rational form of cost-benefit analysis based on applied liberal welfare economics is strong. Often involved in political battles, these scholars are probably the most influential with policymakers of the critical groups, overlapping with strategists and policymakers in many of their intellectual orientations.

¹⁰Richard Neustadt, Alliance Politics (New York: Columbia University Press, 1960).

We leave reflections on the above groups' convergent preoccupations and orientational cleavages until after our other controversies have been reviewed.

Our next controversy concerns global ecological developments.

D. The Limits to Growth Controversy

1. The Focus of Discussion

Recent writings of Jay Forrester, the Meadows, and others¹¹ have begun to challenge a traditional commitment to economic growth that has been characteristic of capitalist societies. These writers focus on the issue of sectoral interdependence through their construction of a highly aggregative world model which rests on the interrelationships of five variables usually studied by different disciplines: population, capital investment, natural resources, investment in agriculture, and pollution. Their models assume the exponential growth of these five variables, a growth which results in collapse of the system when it collides with a fixed environment.

This literature states that all conventional solutions, including governmental adaptations, will be inadequate to cope with this problem of exponential growth: major changes in the values and structures of our society must be considered involving trade-offs between present and future. Some state of "no growth" equilibrium resource autonomy or "sustainable growth" must replace continued economic expansion even if short-run sacrifices to achieve equilibrium seem unpalatable.

2. Critical Perspectives

Critics of The Limits to Growth literature are many and vociferous. They range from scientific criticism of the world models themselves¹² to a questioning of the values motivating the authors to construct

¹¹Jay W. Forrester, World Dynamics (Cambridge: Wright-Allen Press, 1971); Meadows et al., The Limits to Growth.

¹²Models of Doom: A Critique of the Limits to Growth, ed. H. S. D. Cole et al. (New York: Universe Books, 1973).

such models. The major assumptions upon which the models rely are questionable since the use of alternate, equally plausible assumptions has led to very different results. Such reanalyses bring into question the predictive value of the models. Lack of relevant historical data, the high degree of aggregation, and the lack of adaptive technological, economic, and social feedback processes have also been cited as flaws in the world models.

Focusing on value positions, critics like Richard Falk have labeled Forrester as Malthusian, a social Darwinist, and a neocolonialist. While Meadows' discussion of issues such as North-South redistribution should be more palatable to some liberals or radicals, value differences between the two authors have been given little attention, perhaps because of the political infeasibility of some of the Meadows' solutions and the convergent predictions of the Meadows' much more complex models and the Forrester original.

Most critics agree that at least a two-world North-South model is necessary in order to pinpoint distributional issues, dependencies, and responsibilities, and some would ask for much greater information on transnational rich-poor cleavages. Since they feel that Forrester's values are rooted in one conservative variant of the American environmental movement, many critics claim that the high degree of aggregation in his work does a profound disservice to the poor. Distribution of resources, including nonrenewable resources and global "commons" like the air and seas, is considered to be a more fundamental problem than the inadequacy of their total supply. Rather than supporting "no-growth" solutions, these critics subscribe to a reform growth position with lower rates of growth and with different distributions between countries.

A problem, central to both the no-growth and the reformed-growth schools, is how to allocate increasingly scarce resources. What alternatives might there be to the status quo arrangement of allocations? The potential for a new kind of geopolitical conflict between nations competing for scarce resources is high unless autonomy can increase. It could occur on a North-South (consumers-producers) polarity or, equally likely, amongst the consumers themselves. Conflict-avoiding possibilities such as resource independence and consumer cooperation are discussed.

Many of those critical of Forrester's predictions of physical collapse are themselves equally pessimistic about the ability of existing national and international institutions to cope with these problems.

While they cite technological and social mechanisms capable of forestalling ecological crisis, they point to increased political fragmentation, accompanying an increasing number of issues requiring novel institutional solutions. While nations may surrender sovereignty over limited transnational, public goods type issues, no trend toward world government is seen. Other authors have attempted to construct political models to accompany Forrester's state of equilibrium. Their preferred model would be what Falk has termed "multi-level transnationality," involving a mix of regional, national, international, and transnational organizational foci.

E. The New Political Economy Controversy

1. Coping With Market Interdependence and Dependence

Recent scholarly writings and debates about the extent and consequences of increasing market interdependence can be grouped in rather loosely related topical and regional clusters. As noted in Chapter I, some scholars have pointed to high interaction rates in the 19th century or to declining trade shares of GNP as size increases, as evidence against such a thesis of increasing market interdependence. The more policy-oriented literature, however, focuses on other, apparently increasing intersensitivities of the advanced market-oriented countries.

By the late 1960s Japan was included in many of the reciprocal economic agreements linking the West; Japan and Western Europe had recovered from the war, leaving the United States in a less dominant economic position. United States balance of payments problems, the decline of the Bretton Woods system, lower transportation costs and trade barriers, the increasing flow of direct private investment, and lightening short-term capital flows emerged as indicators of market interdependence.

A distantly related set of issues concerned North-South economic relations, including declining terms of trade and the failure of many Third World countries to sustain impressive development after the end

of the Korean War "boom."¹³ Coupled with this trend is the increase of authoritarian rule, often in the form of military dictatorships in the Third World. Disputes have arisen about the role of aid agencies, international banks, and multinational corporations in development. Are they agents of international capitalism, maximizers of world welfare, or transferers of new technology? In alliance with economically dominant local elites, do they help perpetuate a systemic relation of national dependency and warped development?

Two threads tie these issue clusters together, allowing their simultaneous treatment. First of all, both foci place new urgency on questions of national independence or autonomy in the face of increased transnational sensitivities. A second link is the growing concern within the United States and Europe (especially vis-a-vis immigrants, non-citizens, or racial minorities suffering from restrictions on their political and economic rights) that "dualistic" recreations of inequitable North-South relations might be taking place within their own borders.

2. Contending Economic Orientations

Narrowing the scope of our focus to trade, payment, and investment issues, we can discern at least six loose scholarly clusters. We present them roughly in right-to-left order.

a. Market-Oriented Liberals

This group evidences a strong commitment to undisturbed market operations, with government roles usually limited to the correction of market distortions. Free markets with many competitors are seen as a way of decoupling producer-consumer, producer-producer, and consumer-consumer interdependencies. Removing barriers to trade and capital transfer, combined with individual initiative, would help efficient economic growth: more foreign economic penetration, not less, is needed. Although there is little public support for direct economic transfers from North to South, this is often seen by economists in this group (e. g., Harry Johnson) as the best way to preserve efficient market performance.

¹³Miriam Camps gives a much fuller discussion of institutional debates about economic relations in general and development in particular in The Management of Interdependence: A Preliminary View (New York: Council on Foreign Relations, 1974), Chapters 4 and 5.

b. Institutional Liberals

Although attracted by the efficient noncoercive functioning of the market, other writers, like Richard Cooper, focus their discussion on public and private institutional responses to interdependence. Both national autonomy and the achievements of positive cooperation/integration are valued. The key problem for this group is to reconcile trade, money, and investment interdependence while allowing each nation freedom to pursue its legitimate economic objectives. Focal issues include the role of multinational corporations, money markets, and intergovernmental institutions. The future is expected to see an increase in the dilemma between the economic benefits of integration and the loss of control by governments pursuing national priorities. Fearing a breakdown of the system, these authors feel the need for coordination of monetary and trade policies and regulation of direct foreign investment by multinational corporations. The level and form most appropriate for such regulation--transnational, national, regional, or global--is not made clear, however.

Coming from backgrounds in regional integration theory and liberal economics, it is probably correct to associate some recent papers by Joseph Nye and Robert Keohane with this group.¹⁴ They see the key problem as an increased politicization of normally uncontroversial rules and practices of the economic scene. The mixing of economic and political issues increases the complexity of international transactions, which in turn produces friction. For these authors, the solution lies in the depoliticization of economic activity through the development and acceptance of a common economic order. An increasing diversity of transnational actors and issue linkages is disturbing traditional international relations, but many of these trends are to be encouraged as ways of depolarizing potential nation-state cleavages.

Amid a trend toward increasing interdependence between nation states, as political scientists these authors are not as much concerned with discovering the causes of present problems, sensitivities, and vulnerabilities, as with seeking their solutions, largely through crisis management and needed institutional restructuring. International

¹⁴In particular, Robert O. Keohane and Joseph S. Nye, "World Politics and the International Economic System," in The Future of the International Economic Order, ed. C. Fred Bergsten (Lexington, Mass.: D. C. Heath, 1973).

organization of the monetary system must become depoliticized and power relations in one issue area must be consistent with those in others. This theory is free world oriented, aimed at preserving and improving upon a relatively peaceful status quo.

c. Leftist Liberals

This group lies between liberal economists and the Marxist tradition. In addition to Gunnar Myrdal and Raul Prebisch, a principal figure is Albert Hirshman. He addresses himself to constructive change rather than to the outcome of a conservative system. The focus is on redistribution and relations between industrial and nonindustrial countries rather than on economic efficiency. For Hirshman, methodology is a key issue. He objects to functional analysis and equilibrium analysis because of their built-in conservative bias. Causal analyses using econometric methods are also considered suspect, given changing socio-cultural realities.

These authors link domestic and foreign policy; national and international levels of analysis are also related. They frequently focus on North-South issues such as foreign aid, private foreign capital, and the degree of domination of the North over the South through these mechanisms. The inadequacy of the market mechanisms in the allocation of resources is emphasized. Recommended policy measures are not always incremental, but they point toward institutional changes formulated by policy elites, rather than the masses. Where fundamental structural changes are called for, these scholars usually suggest the necessity of revolutionary change coming from above rather than below.

d. Dependency Theorists
(specifically focussed on Latin America)

Some members of this group, such as Osvaldo Sunkel and Helio Jaguaribe, are quite close in thinking to the Leftist Liberal group: characteristically, however, they have criticized Prebischian reforms as inadequate means of reversing Latin American dependency. This group's orientations also overlap with those of North American radical political economists and French structural Marxists, to be discussed below. But its Latin American focus and the deep historical-sociological orientation of authors, including Fernando Henrique Cardoso, distinguishes some of its best work from the purer types of economics and deterministic political economy. Some Americans, including Susan Bodenheimer, Frank Bonilla, and James Petras, write from very similar perspective.

In an unpublished paper¹⁵ Robert Packenham notes four key propositions informing all their analyses:

(1) Unlike most of today's industrialized nations, Latin American nations are constrained and limited in their development by external forces. Declining terms of trade and primary product dependencies are evidence in this regard, at least through the 1960s.

(2) This dependency, or lack of autonomy, involves a two-phase transnational process involving external actions and internal ones responsive to extra-national interest and forces.

(3) Latin American dependency is due to, and reflects, the nature and history of international capitalism. In the current phase multinational corporations are able to end-run the import-substitution approach to industrialization argued for by earlier Latin liberal economists.

(4) In various ways, Latin American dependency is detrimental to Latin nations and peoples (but not necessarily peripheral elites, as Johan Galtung would emphasize).

Among dependency theorists, Marxists can be distinguished from non-Marxists by their methodological assumption of some form of class analysis and the tendency of the latter to take a more exclusively nationalistic orientation. Policy-wise, more-or-less revolutionary positions are advocated. Methodologically there is evidence of sophisticated historical and empirical analysis, usually of a qualitative sort. Many of Hirshman's methodological injunctions would be widely accepted. Yet distinctions also exist among Marxist scholars.

e. Radical Political Economy

This is Marxian theorizing in an Anglo-American environment; Steven Hymer was one of its leading contemporary scholars. Assuming Marxist class analysis, it focuses on the study of imperialistic relationships existing in linkages between advanced and backward economies. Claims are based on a scientific, economic interpretation

¹⁵Robert Packenham, "Latin American Dependency Theorists: Strengths and Weaknesses," (Stanford University, 1974, unpublished).

of reality, which when accepted is assumed will lead to institutional change. There is little discussion of revolutionary political action.

Like earlier American Marxists, more recent authors such as Paul Baran and Paul Sweezy are concerned with the structural domination exercised by forces of the international capitalist system, such as banks and multinational corporations. They talk about dependence, never interdependence, on a global scale. They see as a major reason for domination the inability of rich countries to absorb economic surplus and their need to widen their search for profit.

f. West European Marxists

At least two groups can be distinguished here. One is structuralist, believing that there is one objective structure at the basis of reality: economic relations between countries are governed by the labor theory of value. Lenin argued in his Imperialism that capital exports were necessary for the survival of imperialistic capitalism. In Unequal Exchange,¹⁶ Arghiri Emmanuel assumes the two-way mobility of capital and the immobility of labor across national boundaries. Contrary to Lenin, but also assuming a Marxian revision of Ricardo's Labor Theory of Value, Emmanuel argues that a net inflow of capital to the central countries took place during the imperialistic epoch. He then suggests that the same pattern is true for the 1950s and 1960s. This period is also marked by worsening terms of trade, which have contributed to further concentration of wealth in the rich countries: Emmanuel's apparent aim is not to eliminate the present international trade system but to restructure it institutionally so that it takes place between equals, devoid of structural exploitation. For redistribution to occur, Emmanuel sees the necessity of new institutions such as collectively initiated producer cartels. Written in the 1960s, such proposals would of course imply structural revolution comparable to the one we see today.

Further to the left there is a second group of European Marxists, such as Mandel, who look for more cataclysmic global structural transformations. Mandel addresses himself to the proletariat and his attention is directed toward dependency issues and the interimperialistic

¹⁶Arghiri Emmanuel, Unequal Exchange: A Study of the Imperialism of Trade (New York: Monthly Review Press, 1972). (The original French edition appeared in the middle 1960s.)

struggle between Europe and America which he predicts will lead to the collapse of the system. The focus is on money and trade among economies: actors are economic institutions, classes, etc. Outcomes and trends are described in terms of the inevitability of collapse of the system among advanced economies. International economic transactions are motivated by capitalistic searching for higher profits with the movement of extra American dollars to Europe.

F. European Integration Controversies

1. Integration Options

Literature on integration was in its pioneering stage during the 1950s, when it was mainly descriptive of a process that was actually taking place. NATO links across the Atlantic were considered by some; French-German reconciliation most interested others. With the slowing down of the process during the 1960s, this literature became more complex. Critical literature both on the right and the left produced anti-integration theories: radical authors maintained that integration led to domination by the ruling class and by the United States, while critics from the right were concerned with the fate of the nation state.

2. Integration Theorists

a. Neofunctionalists

Ernst Haas' pioneering work in the late 1950s¹⁷ went beyond David Mitrany's earlier functionalist concern with building international community through piecemeal, noncoercive, welfare-oriented functional arrangements. He stressed the importance of pluralistic bargaining processes among economic interest groups as catalytically translated by political bureaucracies and supranational leadership into new and more powerful community institutions. Other writers like Leon Lindberg, Joseph Nye, and Philippe Schmitter, deepened research on the West

¹⁷Ernst Haas, The Uniting of Europe: Political, Social, and Economic Forces, 1950-1957 (Stanford: Stanford University Press, 1958).

European process and added a comparative dimension.¹⁸ The integration-building roles of compatible values, mutually responsive governments, pluralistic power distributions, joint benefits, and rewarding contacts have been variously demonstrated. The high-political relevance of modern welfare-oriented politics among pluralistic high mass consumption societies has also been argued.

A number of ideas developed about how to respond to the increased economic sensitivity of common market members. Increases in "common interests" and institutional authority ("spillover"), cases and mechanisms of breakdown and stagnation ("spill-back" and "spill-around") were analyzed. Mechanisms for changes were summarized as functional and deliberate issue linkages, the learning of new interests and attitudes, and external stimuli.¹⁹ Failures due to disagreements about federalist objectives were noted in response to changing economic and political contexts. Few non-European contexts could meet the conditions of the West European process.

b. Transactionalists

Karl Deutsch focuses on all types of transactions, not just between groups, as do Haas and his followers. His is a cybernetic approach, concerned with steering, autonomy, responsiveness, and security. He believes that high transactional interdependence offers possibilities of both conflict and cooperation. Integrative processes are necessary, but not inevitable. Transaction data can be used to measure steps toward the building of pluralistic or amalgamated security communities. American-Canadian relations have been an excellent case of a pluralistic security community, but past successes do not insure a continued, peaceful relationship when interests no longer positively covary. Relevant methodological discussions in this literature center on slippery problems of inferring community from transactions, the representation and testing of a predictive theory of integration and disintegration mechanisms.²⁰

¹⁸A useful review of this literature, with special relevance to interdependence, is Robert O. Keohane and Joseph S. Nye, "International Interdependence and Integration," in The Handbook of Political Science, ed. Fred Greenstein and Nelson Polsky, forthcoming.

¹⁹Ibid.

²⁰See particularly chapters by Lindberg, Alker, and Puchala in Regional Integration: Theory and Research, ed. Leon N. Lindberg and Stuart A. Scheingold (Cambridge: Harvard University Press, 1971).

c. Post-functionalists

Responsive to many of the issues arising in the integration literature, including the criticisms of traditionalists noted below, and in recent political economy controversies, one can detect a young group of scholars particularly interested in interdependence questions. Edward Morse, Oran Young, and John Ruggie probably belong here.²¹ There is (1) a general interest in intermediate, often functionally or issue-specific forms of international organization short of institutionalized community; (2) a strong skepticism about function imperatives or inherent systemic ideologies assumed by early functionalists; (3) a sense that more post-modern devolution of authority is taking place than supranational evolution above the nation state; (4) a concomitant awareness of the transnational and transgovernmental pluralization of actor issues and objectives; (5) a methodological interest in public goods theory in economics as a way of explaining or prescribing public sector departures from market mechanism; (6) the perception of an increasing interpenetration of policy spaces among international actors. Writings of this group are particularly sensitive to European political economy, conscious of their integration theoretical heritage, and willing to generalize beyond its regional focus. They often claim interdependence does not necessarily bring peace, but that integration usually does. And they distinguish economic, social, and policy coordination efforts from fuller institutional integration.²²

²¹Two of Ruggie's most interesting articles are his "The Future of International Collaboration," American Political Science Review 66 (September 1972) and his "The Structure of International Organization: Contingency, Complexity, and Post-Modern Form," Peace Research Society Papers, XVIII, The London Conference, 1971, pp. 73-91.

²²An important post-functionalist argument for relevance of integration theorizing to interdependence thinking is contained in the concluding section of Keohane and Nye, "International Interdependence and Integration." Six strong points in its favor are: (1) systematic analyses by issue areas; (2) sophisticated distinctions among types of cross-issue linkages and their cultivation through bargaining for institution-building purposes; (3) focus on agenda processes that politicize some but not other technical issues; (4) emphasis on transnational and transgovernmental actors and processes; (5) increased understanding of the capabilities and limitations of international institutions; and (6) an emphasis on system design.

3. Traditionalist Critics

Writers like Raymond Aron, Pierre Hassner, and Stanley Hoffmann have often criticized integration theorists as overemphasizing the "low politics" of welfare rather than the "high politics" of survival and independence. Methodologically, they are normative analysts who believe in the classical objectives of nation-states, secured through high politics. Convergence of social and economic policies produces higher interdependence but does not automatically lead to integration. If integration is to come in Western Europe, federation is the preferred form. Functional integration is acknowledged, but not integration at the high policy level. Transaction studies are criticized. The nation-state continues to be decisive, as is manifest in divergent West European attitudes toward relations with states outside the EEC; the nation-state survives because nothing better has been found. Peace can only come about through federation and the defining of an external enemy.

Hassner is perhaps the most conservative and anti-Communist. He examines the impact of nuclear weapons on the nation-state and on security negotiations. States are now interdependent because they are penetrable by nuclear weapons. However, those who possess weapons retain some independence because they are equalized; those without weapons are looking for protection which is really dependence.

Hassner's focus often goes to the East-West axis of potential European integration. He envisages East and West Europe moving towards one security community, but suggests it is not feasible as long as West Europe is militarily dependent on the United States and not thinking in terms of East Europe in spite of detente with the U. S. S. R. Furthermore, the Soviet Union would not allow East Europe to become independent enough for a fundamental rapprochement. Thus he advocates a balanced Europe as an alternative to conflict or U. S. domination.

4. Left Critics

Many of the distinctions noted in the political economy field appear again regarding European integration; so do some of the scholars.

Johan Galtung is not a Marxist but employs many of the same terms and analyses. Thus he lies somewhere between Marxism and the neo-functionalists. Interdependence is a condition for integration, but interdependence is asymmetrical when the lower groups of world

society are feudalistically dependent without collaborative possibilities with their equals. The result is crisis and conflict. Galtung also talks about center-periphery structural questions such as terms of trade and division of labor, and includes relations between EEC and associated states as examples. He is particularly concerned with the East-West split in Europe, which he sees as due to East Europe's forceful withdrawal from the capitalist division of labor, facilitated by its historically peripheral treatment. A kind of polyarchal interdependence is advocated as an answer to dependence: East-West coordination could be achieved through the horizontalization of center-periphery structural links, resulting in what he calls the defeudalization of the international system.

While all Marxists seek working class victory and the overthrow of the West European bourgeoisie, they divide on the means to achieve this goal. While some, such as Ernest Mandel, advocate revolution, there are others who believe that non-revolutionary means can be used to influence EEC institutions towards "working class" interests. Mandel argues also that action should be undertaken by national proletariats until capitalistic integration reaches a point at which international cooperation becomes the only possibility. This position is by no means universal amongst Marxists, however: there is a wide divergence of opinion on the issue of national versus international collaboration.

G. Convergent Preoccupations and Divergent Orientations

We shall "process" the above controversies again in parts of Volume III. Here we look for convergent preoccupations and divergent orientations common to all four of our controversies. These are likely, we predict, to reoccur in other emerging debates about interdependence, such as the energy case studied in Volume II.

Our review of the major arguments and competing assumptions of contending analytical orientations produced both the expected cleavages: (1) East-West and (2) North-South. Distinguishable meanings for these summary labels should be noted, however. The character and substance of the East-West debate varies from area to area, but a common scholarly preoccupation with proposed or observed limitations of market liberalism is discernible. Conservative-liberal-radical and capitalism-socialism dimensions infuse debates with equity, efficiency, and stability dimensions. Such debates cut transnationally across national boundaries in the Americas and Western Europe. Even though we group

them together for convenience, they should not be identified with the related East-West issue in international politics. Most liberal critics (as defined earlier in this chapter) would agree at least in part with liberal critiques of practices of international communism as imperialistic and overly repressive.

A North-South cleavage shows up in methodological and value terms. Rich versus poor, welfare and equity concerns appeared in all controversies. Marxist and structuralist literatures agree about transnational, class-linked exploitation (in Marxist terms, forcible surplus value transfers). A post-modern/modern/transitional/traditional version of this cleavage is evidenced in common preoccupations with ecological values, with post-modern and traditional positions being the most adaptive, transitional and modern the most exploitive.

Going beyond the expected, Table II-1 points toward several other interdependence issues. Policy debates have become much more sensitive to structural questions. For example, in each area, there are several groups concerned with systems design, attempting to redefine interaction situations as well as habitual responses. Design involves modifying (i) action-outcome causal contexts (e. g., technological possibilities), (ii) operational rule structures (e. g., arms race dynamics), (iii) possible action alternatives (e. g., by reducing economic sensitivities), or (iv) national preferences (e. g., away from high politics).

One such theme evidencing increased concern with structural options is (3) the revised quality of autonomy and invulnerability considerations. The transnational/transgovernmental fusion of high and low politics is evidenced by the reversing of traditional positions: most strategists now see and accept high superpower mutual vulnerability; many political economists see this to be the case but prefer just the opposite. Welfare-oriented neofunctional integration schemes are seen to be at least partly vulnerable to spill-back as well. Many, but not all, ecologists have argued for increased resource autonomy as a way of avoiding (or winning) geopolitical clashes.

Structure-sensitivity shows up as well in the (4) loyalty-identity issues occasioned by a commonly recognized, increasing complexity of international relations. Marxian internationalists have been analyzing class structures induced by transnational divisions of labor for a hundred years; their increased interest in differences among nations in this regard is much more recent. Liberal nationalists write more

Table II-1 Cross-Group Issues in Our Four Interdependence Controversies

	National Security	Ecological Limits	Political Economy	Regional Integration
1) East-West issues	Superpower condominium.	North-South split on who gets scarce resources.	Rich-poor distribution (equity), exploitation (surplus value), and dependency questions.	"Feudalistic" exploitation of periphery powers by central ones.
2) North-South issues	Relative responsibility of U.S. and U.S.S.R. for Cold War; necessity of war or revolution for security.	Extent to which market pricing adjustments will smooth scarcities.	Liberal capitalism vs. socialism: adequacy of an efficient market orientation for security and growth.	Degree of anti-communism or liberal pluralism.
3) Autonomy vulnerability issues	Importance of autonomy and invulnerability in deterrent relationships.	Extent to which geopolitical conflict is occasioned by scarce resources.	Decline in national autonomy annotated with high (inter) dependence.	Vulnerabilities of national governments and integration schemes to high politics.
4) Loyalty/identity issues	Loyalty/identity conflicts regarding bureaucratic trans-state, national, supranational, global security interests and appropriate institutional responses.	Conflict between global, regional, and local problem definitions and policy responses associated with "multi-level transnationality."	Conflicts of multinational firms with class, national, regional, or global economic interests.	Extent to which loyalties and capabilities should go below, through warfare-generalizing nationalism or class antagonisms as "common interests" are upgraded.
5) Interest interdependence issues	Extent of positive or negative mutuality of interests in interdependent, deterrent relationship.	Extent to which technology and cooperation can turn zero-sum competition into a positive sum equilibrium.	Degree of mutuality of gains and interests in trade and payments relationships. Public goods.	Extent of sharing of benefits from integration, within and outside EEC.
6) Realism-idealism issues	Political realism vs. structure-building orientation; power balancing and détente building.	Degree of optimism concerning coordinated institutional responses to ecological problems.	Possibilities of economic warfare vs. contribution of market division of labor to a liberal peace; benefits and costs of higher interdependence.	High politics vs. low politics; adequacy of functionalist integration and crisis management as peaceful community builders.

about the increasing importance of fairly autonomous nongovernmental and sub- or supra-governmental actors. With the growth of accommodation and detente, high and low, domestic and foreign politics became negotiable, as evidenced in law of the seas bargaining and European integration. Marxists and market liberals note with approval or despair the increasingly complex and difficult policy agendas facing institutional actors.

Loyalty-identity dilemmas come with this complexity, with parochial, transnational, national, regional, and global interests and policy responses frequently divergent. What is good for the Air Force may not be good for the nation, NATO, and the world, even when different national air forces collide in cases of transgovernmental alliance politics. The same complexity of identifications and responses plagues Europeans torn by local, linguistic, national, and supranational loyalties and concerns.

Along with structure-sensitivity goes more debate in security, ecology, political economy, and integration contexts about (5) the interdependence of interests, the covariation of salient utility costs and benefits across a wide class of international groups. Answers to the question of who is included in the positive side of old or emerging institutional arrangements reflect what post-functionalists or institutional liberals would call public goods. Their critics would question the distribution of these "goods," suspecting political/governmental centers or dominant classes to be getting an unequal share of such rewards.

Both the debate about the shared rewards and (6) the reemergence of a recent realism versus idealism cleavage reflect another common preoccupation already implicit in the various issues discussed above. Scholars of very different persuasions, including realists and traditional nationalists, are increasingly preoccupied with weakly coordinated, piecemeal, functionally or geographically limited and often competitive world order building efforts. Whether such efforts are pointed toward structures of peace, regional spheres of interest, exploitation-free, or "depoliticized" economic systems, these interests go considerably beyond the traditional realist concern with independence, power and alliances. Hence post-functionalists are right in claiming new relevance for their community/institution building theories and designs.

CHAPTER III

SOME POLICY IMPLICATIONS

by

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A. Four Insights

In reviewing the available evidence about interdependencies and the worldwide policy arguments concerning them, four major insights have struck this author. I will state them briefly and simply, but their complexity and importance for policy cannot be overestimated. The preliminary analysis on which they are based is found in Chapter I. Clearly, each warrants more study. Some appropriate remedial policy actions are suggested later in this chapter.

The first insight is that what creates problems out of interdependence is not the fact of interconnectedness, but the dependency experienced by one or both parties. As I tried to show in Chapter I, few important relationships are completely symmetrical. What to the stronger or richer partner is a wholesome, mutually beneficial interaction may be a source of burning resentment to the other. The current debate about interdependence sharply highlights the greatly different views held, with Americans generally praising interdependence as highly valued, while many Third World (and other) critics condemn it as a mask for "imperialism."

At root, the quarrel is not over man's inability to go it completely alone; few deny that fact, which generates most of the clichés about interdependence. Basically, the quarrel is over asymmetric dependence. The nature and depth of the political and attitudinal tensions which unbalanced dependencies create can and should be calculated more accurately than at present. One way is refinement of the approach suggested at the end of Chapter I for analyzing the "deficits" in mutuality of such relations.

The second insight is that, in practice, interdependence seems to operate on the basis of a principle of "critical mass." Too little mutual

dependency between countries may deprive them of mutual benefits, and the resultant isolation can keep desirable mutual understanding from growing. But excessive interdependence can distort the relationship and produce unwanted longer term consequences. There is no current formula for determining the optimum balance (although I argue throughout for the virtues of maximum symmetry). It is empirically observable, however, when a relationship exceeds an "irritation quotient."

To be the exclusive customer of a nation producing a primary commodity tends to give the consuming nation an unnatural power to control the producing country's internal economic life, while generating in the latter an unhealthy sense of high vulnerability. Some producers of, e.g., coffee have experienced this condition, and in parts of Latin American it has contributed to widespread anti-U.S. sentiment. The same has sometimes happened with respect to exclusive armament relationships; in seeking diversification, the client state's alternative is often the Soviet Union. (For their part, the Soviets have also begun to experience the unwillingness of client states beyond their direct control to become excessively dependent, e.g., Sudan, Egypt, Algeria, and, increasingly, India.)

Even if the relationship appears to be in a "net" balance, too much mutual dependence can sometimes irritatingly overload the relationship. My own interpretation of current U.S. - Canadian relations suggests that it is not simply the one-sidedness of U.S. investments in Canada that has produced mounting strain. Rather, it is the totality of penetration in the social, cultural, and informational sectors as well. In return, Canada receives many economic and other benefits, and above all enjoys a total U.S. defense commitment.

But in the France of President de Gaulle, the overload of interactions composed of trade, investment, consumerism, military integration, mass tourism, and cultural inroad led, as pointed out in Chapter I, to sharp unilateral French assaults on many mutually important sectors of the relationship. Another example may be that of Soviet-Romanian relations in the same period. If political integration is not going to follow such a high degree of mutual interdependency, this threshold effect argues for major American efforts to restructure U.S. - Canadian relations more symmetrically.

The third major policy-relevant insight is that, at bottom, there is nothing automatic about interdependence, despite beliefs in the

economic determinism of Karl Marx or the invisible hand of Adam Smith. Within societies, interdependence also exists, and indeed may share many comparable characteristics with the global scene. But by and large, the terms of the domestic bargain have historically been struck, and internal relationships are normally governed by agreed rules, statutory or tacit. In international relations interdependence is still at least theoretically optional if one is able and willing to pay the costs of opting out. Strategies of dependency-reduction are obviously available in economic relations; similarly the protector or the "protectee" in a mutual security relationship can in theory become neutral, switch sides, or opt out of at least one sector in the overall relations.

If this be doubted, one has only to list a few examples of actions taken recently by manifestly interdependent countries to reduce their dependence on constraining external sources of: energy (United States), technology (China), manpower (Switzerland and Canada), markets (Japan), economic great powers (Cuba, Argentina, Romania, Poland), and monetary systems (France, Italy). General withdrawals from ties of interdependence are of course much rarer, although at one time in recent years both China and Burma so opted.

In short, interdependence in international economics and strategic relations can be onerous or promising, costly or cheap, symmetrical or asymmetrical; it often grows before the actors are fully aware of it, and in that sense is not always conscious. But in the final analysis it is not foreordained but optional. In considering available policy options which might be open in situations of economic interdependence, the key question still is: "How costly?"

Fourth--and possibly most important of all--states act on the basis both of the statistical weight of dependent and interdependent relations, and also how their people feel about such relations. Of course different groups in a given society can view dependent relations quite differently. But there has been enough experience now with nationalist leaders on every continent calling for greater national autonomy, to establish the existence of widespread sentiments which a political leader can mobilize by articulating them.

The psychological component of interdependency is without question crucial and, if analyzed, can, I believe, supply valuable clues to policies that could lessen the burden of and potential conflicts arising from relations that are asymmetrical or felt to be so. The "deficit" between one side or the other can be compensated for in the first

instance by the tangible policy components of money, power, trade, technology, and the like. But if that is not feasible, they can and should be compensated for psychologically. (For details of this argument, see Chapter I; also Appendix B.)

B. Some Policy Options

The remainder of this chapter addresses interdependencies as perceived from an American policy perspective. In outlining possible policy stances for the United States, it is at the same time essential to look at the same relationships from the other end.

What kind and range of options are open to the United States (and others) that can be pursued, unilaterally if necessary, to correct for the potentially damaging effects of asymmetric dependence? (The related question, to which I will return, deals with relationships that cannot be made symmetrical without more general "community" agreement on rules of the game--what Professor Alker describes in Volume III as regimes and quasi-regimes.)

Five principal options are theoretically open to the United States in those cases where it experiences (or perceives) asymmetric interdependence (they are displayed graphically in Figure 1 at the end of this section):

1. To reduce the risks inherent in dependency. In the present political environment, this means defenses against arbitrary action by producers of primary raw materials. The strategic goal would be to ensure U.S. access to a reasonable share of such raw materials, at least until substitutes could be found or developed at a reasonable cost. Three sets of policy means would seem to exist to implement that strategy:

- (a) Development of improved political relations
- (b) Coercive use of U.S. military or economic power
- (c) Internationalization of the resource, or lesser collective arrangements for its management

Improved political relations include: better understanding of the other's perceived interests; compromises on issues of deep concern to the other; redefinition of ideological blocks to agreement; and restraints on one's own instruments of policy. Policy (c) is discussed in the last section of this chapter.

As for policy (b), dire predictions have been heard as to the possibility of force being used at some future date to overcome asymmetrical resource dependency. Public reports of "long-range Defense Department studies" list nine crucial "strategic chokepoints or maritime bottlenecks through which various materials will flow, ranging from Gibraltar to the Strait of Hormuz, which we must thus dominate politically and militarily" (emphasis added).¹ If this is an accurate report, it raises profound policy questions for public debate.

First, a policy of dominating access routes could as well be adopted by other parties with interests, such as Western Europe, Japan, or the Soviet Union. Second, the suppliers in question are likely to respond preemptively, as the Arab oil producers did in 1973 when the United States resupplied Israel. This fantasy of unilateral domination aside, it is not at all clear that the United States has the right to try to impose its will on all other producers and traders.

However, apart from the moral calculus involved, there are technical obstacles to employing modern variants of gunboat diplomacy in cases where delicate machinery and instruments control the resource flow, as in petroleum. It was not clear in 1974 what military countermeasures were in fact available even to the most powerful country in the world in the face of threats by Arabian countries to blow up their portside installations. And certainly the Japanese government had only to consult a globe to see how phenomenally difficult the application of force would be to the maintenance of a lifeline stretching through the Strait of Malacca and the Strait of Hormuz, not to mention all the other seaways traversed. By all estimates, a Western military attack on Gulf oil installations is virtually the only way the Soviet Union could get a strong foothold there, hardly something we ought to facilitate.

It could be, as a Soviet official commented to the author last year in Moscow, that the more power the superpowers acquire, the less influence and control they seem to have. Short of territorial conquest,

¹ Robert D. Heintz, Jr., in San Diego Union, August 25, 1974.

evidently traditional military power is simply not relevant to cutbacks in oil production, short-term movements of liquid capital, or cartel repricing of copper, tin, or bauxite; or, it should be added, U.S. - grown food.

2. Another option is to seek to become less dependent. The relevant strategy depends on the type of relationship:

(a) Toward the Third World in general, recommendations are increasingly heard for a strategy variously labeled "disengagement," "decoupling," or "benign neglect" (referring, broadly, to military, economic, and political relations). Some analysts argue that U.S. military withdrawal from virtually all overseas deployments would not jeopardize U.S. interests. Professors Cooper and Nye suggest that, given a continuation of mutually beneficial trade, even a hostile Third World would only be an inconvenience to the United States.² Robert W. Tucker believes that withdrawal would not damage U.S. interests since trade and investment in Western Europe, Canada, and Japan are what are really crucial.³ Earl C. Ravenal sees such a strategy as "an anticipatory adjustment--a long, major adaptation to an evolutionary process of the international system and a basic social situation in the United States."⁴ The same kind of argument is advanced by James Chace, who argues that a "reasonable withdrawal" of U.S. forces in NATO and a policy of nuclear equality toward Britain and France would help Europe to become more independent of America and thus be "an even more reliable ally," by getting rid of the "client-state stigma."⁵ Others of course argue against such "decoupling."

²Richard N. Cooper and Joseph S. Nye, "Disengaging from the Third World: Can We Help Without Hurting?", working paper prepared for Council on Foreign Relations Study Group on World Order, December 20, 1972, pp. 4-20.

³He goes on to assert that "Even if the nation's material well-being were dependent upon its economic interests abroad, it does not follow that an American military withdrawal would jeopardize those interests. . . ." Robert W. Tucker, A New Isolationism--Threat or Promise? (Washington: Potomac Associates, 1972), p. 64.

⁴"The Case for Strategic Disengagement," Foreign Affairs (April 1973), p. 510.

⁵"The Concert of Europe," Foreign Affairs (October 1973), p. 108.

The United States has more options open to it than most in pursuing a path of reduced interdependence. But a developed country far more acutely aware than we of the pains of interdependence--Canada--has adopted the option of devising a "wide range of policies which would reduce Canada's dependence on and vulnerability to the United States," according to Foreign Minister Mitchell Sharp.⁶

(b) Toward raw materials producers, the classical strategy calls for product substitution along the lines of the German development of butadiene--synthetic rubber--in the 1930s. National policies to implement this strategy include establishing price floors for energy producers, encouraging innovative technology, and underwriting investment in potentially uneconomic substitutes⁷ (perhaps treating them as sunk capital for standby use, just as we treat the investment in ICBMs in their silos).

Among the means for carrying out such a strategy of dependence-lowering is the reduction of consumption. In many ways this may be the optimum strategy both for maintaining a tolerable physical environment, and for reducing the feeling of dependency that underlies sharply asymmetrical relations. By voluntarily reducing consumption of a particular commodity, future interdependency equations can be bypassed without either the distortions of autarky (see below) or the inefficiencies and high costs of product substitution.

Another means is to expand total supply, with a view to diversifying supply sources (as recommended, inter alia, by the National Commission on Materials Policy, and discussed briefly in Appendix A by Ann Alker). For the United States, this could mean turning to the Soviet Union and perhaps, in the future, China, as potential sources of natural gas and oil. Of course, considerations of optimum interdependence (as well as national security) would argue for not becoming more

⁶In International Perspectives (Autumn 1972), cited by Robert M. Dunn, Jr., in "Canada and Its Economic Discontents," Foreign Affairs (October 1973), p. 123.

⁷One major drawback of a product substitution strategy is high costs, including possibly excessive environmental costs. As a Ford Foundation Report on energy asks: "Can the United States develop its resources at a greatly accelerated pace without doing irrevocable damage to the nation's health and environment?" Exploring Energy Choices, A Preliminary Report of the Energy Policy Project of the Ford Foundation (1974), p. 19.

than fractionally dependent on the new sources.⁸

It hardly needs to be said that this strategy of less dependence and greater autonomy is favored by many LDCs for themselves. Already some of them are taking steps to insulate themselves by various defensive measures against such transnational forces as the MNC. Some of the dependencia theorists reviewed by Professor Alker in Chapter II argue that import substitution does not work very well in ending dependency in Latin America since it leads to stagnation of domestic growth and a local economy incapable of integrating large sectors of its population (which further confirms the predicament of the poor countries in being less important to the rich countries than vice versa). But with important parts of the world dependent on imported foodstuffs, the UN World Food Conference sensibly recommended that the LDCs increase their own food production through fertilizer and pesticide aid, irrigation, drainage and flood control, and research, all to provide more food while reducing imports.⁹

3. The third major option is to increase mutual dependency on the premise this will lessen the risk of conflict or deprivation of access. The strategies involve increasing the number and variety of political, economic, financial, cultural, and psychological ties and making them more binding.

This is, of course, the current strategy pursued by the United States vis-à-vis the U. S. S. R. and C. P. R. Many people believe this makes good sense not only for the hypothesized political-security "spillover," but because U. S.-Soviet and U. S.-Chinese trade are potentially large and even now the U. S. positively needs Soviet petroleum and forest products, chrome, vanadium, and other minerals. (Some of the latter can be obtained from South Africa or Rhodesia, but the political costs in the latter two relationships may even come to outweigh those involved with superpower partner/adversaries.)

⁸Former Soviet Trade Minister Anastas Mikoyan told an American visitor recently that the United States will not become dependent on Soviet gas because the Soviet Union will not let us take more than 6% of our needs from it.

⁹New York Times, November 17, 1974.

Our associate Richard Kugler has noted that many strategists are now seeing positive advantage in the vulnerability that grows out of strategic mutual deterrence, arguing that it has a stabilizing effect by placing major constraints on the behavior of superpowers and giving both sides a common interest in peaceful coexistence.

This is also what is happening in U.S. --and other-- relations with Gulf oil-producing states, as they begin to arrange to use their increased capital to import major Western industrial goods and equipment, and to invest in Western capital and commercial markets. Saudi Arabia is considerably more dependent on the United States in 1974 than it was in 1973, equalizing the interdependence at least somewhat.

Professor Choucrist suggests in Volume II that should critical commodities be denied in the future to consumers, important policy leverage exists for manipulating the producing countries' behavior, given the reliance of four major petroleum exporters upon U.S. imports which, she argues, are more important to them than their exports are to the United States. Professor Choucrist also cites the possibilities of redirecting trade. Perhaps most crucial, she cites the potential leverage available to the United States as a major exporter of cereals and flours to the oil-producing countries. Our associate Vincent Ferraro reminds us also that Arab loans to finance oil purchases would tie the exporters more closely to the importers, despite the additional economic dependence, by making the exporters dependent on assured repayment.

The "trilateral commission" of unofficial spokesmen for Western Europe, the United States, and Japan has reportedly discussed a bargaining strategy whereby industrial nations could trade access to supplies for access to markets at stable and remunerative prices, access to technology and investment capital, and access to a greater share of decision-making in international economic institutions.¹⁰

¹⁰The New York Times, June 19, 1974. Among the recommendations of the National Commission of Materials Policy is exploring an increase in producers' dependency on the United States. Materials Requirements in the United States and Abroad in the Year 2000 (March 1973).

4. Option four is that of autarky or self-sufficiency. The strategy is to insulate the United States from dependence on other countries, particularly for raw materials but also for manufactured goods, on the assumption that such dependence is potentially dangerous for national security and freedom of action.

The means include barriers to imports, product substitution, domestic resource development regardless of cost, and demand curtailment. This is a strategy that has been tried in the past by nations seeking to maintain national political self-determination and to avoid economic dependency, for instance Germany in the 19th century while Britain promoted free trade, and Russia and China in the 20th. Former President Nixon's original version of "Project Independence" calling (unattainably) for energy self-sufficiency by 1980 was an egregious example.

A reasonable amount of self-sufficiency is probably a sound general strategy where there is danger of excessive dependency, although such self-sufficiency ought not go beyond the point where its costs to others become burdensome. But the costs to everyone of an extreme strategy of autarky are demonstrably excessive, short of a war situation. If the larger national purpose is to decrease tension and increase international cooperation, a strategy of autarky, with its harmful effects on others through export of unemployment, dried-up markets, dumping, preemptive buying, and the like, is not only immoral but in the end counterproductive since it inevitably provokes retaliation. The world economic system is far less able today than before to absorb such shocks.

5. Option five is to manipulate interdependence asymmetry as a lever to achieve political purposes, exploiting the dependence of others to enhance one's bargaining position.

The Arab oil-producing states did this in 1973-74 to put pressure on the United States to moderate its partisan Middle East stance--which it did. Now arguments are made for the United States to do the same with its dominant position as an agricultural exporter. Particularly if petroleum-based fertilizers continue to become scarce and expensive, the United States will have an undisputed advantage, above all with those less-developed countries whose out-of-control population growth outpaces their food production. Professors Keohane and Nye in their analysis of "linkage strategies" concede that the 1971 economic shocks

showed the financial deterrent to be a "usable power resource,"¹¹ and conclude that "in the economic as well as the military area," the United States retains an "escalation option."¹² However, they also warn that "linkage strategies generate counter-strategies."¹³

In general such linkage strategies appear shortsighted, since they do not seem to be effective in any but the short term. The United States was unsuccessful throughout the 1950s and 1960s in dissuading Western Europe, despite the close alliance relationship, from increasing its trade with the U. S. S. R. and the Chinese People's Republic. The Soviet Union, for its part, has not been able to bargain a secure political position in exchange for economic and military aid to several Middle Eastern states. The Gulf states have encouraged the United States toward more even-handed Middle Eastern policy, but have by no means persuaded it, even with a total petroleum embargo, to cease acting as a prime supporter of Israel, although they succeeded in Europe and Japan.

U. S. government spokesmen have acknowledged the hazards of pressure tactics, with Secretary Kissinger speaking publicly of "how impossible purely selfish policies are and how suicidal for everybody it is to pursue totally independent courses."¹⁴ The White House recently warned that "no country can take major unilateral actions without risking retaliation and turmoil in world economic relations."¹⁵ However, the United States government has on occasion done just this,

¹¹Robert O. Keohane and Joseph S. Nye, "World Politics and the International Economic System," in The Future of the International Economic Order: An Agenda for Research, ed. C. Fred Bergsten (Lexington, Mass.: D. C. Heath, 1973), p. 134.

¹²Ibid., p. 126.

¹³For example, "The growth of American direct investment abroad increases the range of strategies open to other states, since they may be able effectively to threaten, implicitly or explicitly, to nationalize American-owned assets." Ibid., p. 121.

¹⁴News conference, January 3, 1974.

¹⁵International Economic Report of the President, transmitted to the Congress, February 1974, p. 3.

<div> <div>U. S. Relations With U. S. Strategies</div> <div>Optional U. S. Strategies</div> </div>		<u>Allies</u>	<u>Communists</u>	<u>LDCs</u>	<u>Resource Producers</u>
1.	Reduce Risks a. Improve political relations b. Coercion	- - - - - Not applicable	- A L W A Y S Counterproductive	U S E F U L - - Decreasingly applicable	- - - - - Not efficacious
2.	c. Internationalize Lessen Dependency	- - - COULD LESSEN STRAINS ARISING FROM ASYMMETRIC DEPENDENCY Reducing level of mutual dependency, if high, should reduce dependency would be strains	Not applicable now (excessive future dependency would be undesirable)	Would avoid unwanted intervention consequences and reduce current tensions	Desirable, through: product substitution, alternative energy sources, lessened consumption, diversification of supply.
3.	Increase Mutual Dependency	Danger of producing overload in current atmosphere	Current U. S. - Soviet strategy, based on persuasive logic	Undesirable in terms of lessening U. S. involvement	Very desirable to balance relations better, increase stake in stability of flows
4.	Autarky	- - - HISTORICAL COUNTRY COUNTERPRODUCTIVE			
5.	Manipulate Asymmetry Through Linkage Strategies	Theoretically possible to gain economic advantages by threatening insecurity or withholding exports, butchancy	Unproductive	Possibly counter-productive politically	Possible Western countermeasures available in future (but becomes increasingly Option 3)

TABLE 1. Major U. S. Interdependency Options

for example the August 1971 unilateral economic "shocks," the subsequent soybean embargo to Japan, and the various hints to allies concerning the security costs of excluding the U. S. from lucrative European community markets.

Indeed, a purely cynical U. S. strategy might even re-escalate the Cold War in order to bring its allies back into economic line. More realistically, a respectable argument can be made that, particularly in the case of newly prosperous allies such as Japan, it is desirable to make their security dependence on the United States more visible. But as a general proposition it seems unlikely that the United States could flourish in a world in which people made markets on "security futures" as they do on commodity futures, shifting from one alliance relationship to another as they recalculated the odds. The resulting instabilities and sudden disequilibria would hardly comport with the goal of reducing international tension and moving toward a more cooperative world order. Yet particularly given the food supply prospects, it will take remarkable statesmanship in the years ahead to forego the urge to demand compliance with U. S. wishes as a price for continued commercial and/or security benefits. We are entering an era in which numerous other countries are likely to react nationalistically to perceived asymmetries in their economic and security relations. The test for the United States will be to refrain from contributing to (or, a fortiori, leading the way to) such short-sighted and eventually counterproductive strategies.

C. Toward a Strategy of Interdependence

I have argued that what creates problems in interdependent relationships is not the fact of interdependence, but unbalanced dependencies. Put differently, we are all interdependent, but do not wish to be overdependent on any single country or source for things of value to us. What is needed, then, is a conscious, purposeful strategy of interdependence whose goal is to convert asymmetrical dependency situations to true interdependence through policies aimed at offsetting or eliminating what I earlier characterized as the "interdependence deficit." Where that is not possible, the goal is to reduce the likelihood of conflict by transforming the relationship itself.

Drawing on the first three of the suggested policy options, while rejecting autarky and manipulation, four elements of a strategy of interdependence suggest themselves. Their aim is to reduce the

sharp edges of the problem in the shorter term, and in the longer term to move more decisively toward the improved world order of which U.S. rhetoric so insistently speaks. The first two bear chiefly on U.S. relations with Third World countries, the third is concerned mainly with U.S. alliance relations, and the fourth deals with collective decision-making.

As a preface to a coherent strategy, one must reexamine at the conceptual level the deeply divisive issues that underlie contemporary policy debates on interdependence. Some of these cannot be resolved short of radical social and intellectual change. But perhaps others provide a basis for rethinking U.S. policies in an era of "scarcity conflicts."

On one side are those who regard entangling mutual (or even asymmetrical) economic dependencies as good and natural. Many Americans regard that web-spinning (except for petroleum dependency) as contributing to an advantageous trading and balance of payments position, and to steady GNP growth. The U.S. government positively advocates deliberately created interdependence in relations with adversaries.

At its extreme, this position implies the pursuit of a strategy of maximum advantage, even at the cost of very asymmetrical relationships, and it prefers to rely on the international "market mechanism" for any marginal adjustment. At worst, this position would accept with equanimity the fact that "a child born in the United States will consume from thirty to fifty times more goods of all descriptions in his lifetime than one born in the highlands of Bolivia."¹⁶ In the same spirit it would accept as a positive good that, with 5.5% of the world population, we use 33% of the world's energy, on the basis that (as enunciated by ex-President Nixon) it "isn't bad; that is good. That means that we are the richest, strongest people in the world. That is why we need so much energy, and may it always be that way."¹⁷ In pursuit of this philosophy, the United States would adopt a strategy of unrelieved zero-sum advantage, accepting if necessary trade wars with allies, jeopardy to détente, confrontations with raw-material-producing nations, and rejection of claims of poor nations for special treatment.

¹⁶Marcos G. McGrath, "Ariel or Caliban?," Foreign Affairs (October 1973), p. 89.

¹⁷Speech to Seafarers International Union, November 26, 1973.

The United States by no means follows the extreme version in all its dealings. However, even the moderate version can nonetheless be sharply distinguished from the contrary philosophy.

At that other pole are those who see interdependence as simply papering over predominant U. S. corporate control of foreign economies, with few benefits to the masses of people there and no serious effects on the desired redistribution of global wealth. At its extreme this opposing policy calls for massive redistribution of wealth from the "have" countries to the "have-nots" to the point where they will feel "equal." Such a policy would presumably involve either elimination or expropriation of all multinational corporations operating within the boundaries of the poorer countries. The motivating philosophy for U. S. complicity in such actions would supposedly be guilt feelings toward those who remain poor in the face of U. S. affluence.

The value questions which underlie these policy quarrels go to the heart of political and social philosophy. The value of growth is in conflict with values of quality of life and conservation of nonrenewable natural resources. The attachment to capitalism and the free enterprise system is in collision with the premises of socialism and economic democracy (although both in practice pursue a "more is better" approach rather than one of "enough is best"). There is also a profound difference between those who wish to maximize economic efficiency (which usually calls for an unregulated market), and those who on grounds of equity or idealism favor maximum participation (and therefore usually give primacy to multilateral management of economic, social, and technological interdependencies).

The extreme strategy of maximum advantage-seeking is a logical outgrowth of an orientation that combines nationalism with laissez-faire economics, however its proponents may wish it were possible to soften its damage to others. Intuition combines with historic lessons to warn us of the grave dangers in such an unbridled "beggar-my-neighbor" approach.

The extreme strategy of expropriation and confiscation arises equally logically from its philosophical foundations. But aside from the injustice in punishing peoples who have worked hard for their financial, agricultural, or economic successes, there is little evidence that by itself such a draconian step would eliminate the deep-seated tensions arising from ethnic, linguistic, tribal, ideological, racial, territorial, and other clashes, not to mention those within both capitalist and

socialist societies arising out of alienation from work and from traditional institutions.

Disposing of the extreme positions leaves the gut problems of interdependence unsolved. For major world powers, those problems will remain unsolved until some common norms are revised. At a minimum, finite supplies of both raw materials and of common shared "spaces" require that the norms of greed and of growth for its own sake be altered. Norms of moderation, cooperation, sharing, and tension-reduction are logically called for by the evolving world situation. They will not be easy to attain in an age of resurgent nationalism. And surely they will not seriously influence governments and elites unless they are shaped and explained by leaders, both governmental and nongovernmental.

Given a better thought-through conceptual foundation for a U. S. interdependence strategy, what should follow are policies aimed at remedying some of the revealed "net deficits" in major areas of U. S. foreign relations, while preserving a reasonable "return" for the American world contribution. Only a few illustrative specifics can be suggested here.

1. The first element in a more coherent interdependence strategy is a program of modest "decoupling" of those interdependent links which threaten to create excessive strain through excessive "presence." This strategy is already being achieved in part through reductions in the U. S. overseas military presence, as well as in de facto discounting of peripheral U. S. commitments. There has already been considerable downgrading of the significance to the United States of numbers of developing countries, as the worldwide "box-score" approach of the Cold War has yielded to a more discriminating evaluation of U. S. vital interests.

Where economic interdependency generates undesirable social and political costs, one solution is to reduce the overall U. S. economic presence, governmental as well as commercial. Investment can be positively discouraged by government policy, as the United States did for many years vis-à-vis Communist countries. Another way is to put greater distance between the MNC and the U. S. government. Private investment can be more visibly disconnected from vital interests of the United States through a more deliberate policy of encouraging and fostering devices such as investment guarantees, joint companies and ventures encouraged by tax breaks, reinsurance arrangements, concessionary-type loans to compensate for purchase or takeover, and

multilateral "buffers," along with policies that positively favor constructive regional regime-building in the form of customs unions, common markets, and the like. Where there is no choice, MNCs should be more tightly regulated.

Unregulated activity on the part of multinational corporations (MNCs) has created profound discontent that may be beginning to outweigh in its high political costs the benefits to the recipient countries, and perhaps in time even the profits for American investors. It is unrealistic and unfair to ask MNCs to regulate themselves; private corporations do not act either as social service agencies at home or selfless diplomatic agencies abroad. But an enlightened corporate policy might well see its self-interest served by imaginative policies of profit-sharing, workers councils, or mixed managements.

More than that, international ground rules and regulatory mechanisms are needed to bring the MNC under at least the same degree of oversight that the United States government, for much the same reasons, imposed on American corporations in the late 19th and early 20th century, with no visible discouragement to them. A world system without sovereign powers is far more limited, but could still agree on principles. (See next section.)

The very facts of interdependence, implying as they do deep dependence on the part of poorer and weaker countries, will create tensions even with a modified U. S. military and commercial profile. Steps will still be desirable to move more purposefully to meet the acute sense of injustice on the part of those primary commodity-producing countries whose vulnerability greatly exceeds our own because of their lack of diversification in the face of dependence on U.S or other Western support. A vehicle that might help meet this requirement--negotiated international commodity agreements--has been generally opposed by the United States government on ideological grounds. Some we accepted have not always worked well. Yet it is difficult to see how the underlying problem can be met simply through reliance on a world market subject to extreme fluctuations.

Long-term dependence of so many other people on food imports strongly underlines U. S. support for cooperative world food reserve programs. At the same time, increased rather than lessened dependence on the United States may arise from chronic food shortages in some of the most populous LDCs. More food for these societies and less dependence on the United States both point to major efforts to increase indigenous food and fertilizer production, preferably through non-

national, multilateral aid and technology programs.

Finally, assuming--as I do--the validity of the often-stated goal of seeing that even diminished U.S. aid reaches the masses of poor people in developing countries rather than just a small elite, a fresh, independent analysis is called for to see why that goal remains basically unachieved.

With U.S. Third World policy decreasingly driven by security imperatives, a modified "decoupling" will leave the United States even less generally aware of the poorer nations. One possible consequence is that the danger may increase of mass starvation and associated human disasters in highly populated portions of the globe, which may be ignored by rich countries who have downgraded their direct interests. As the United States becomes far less conscious of the poorer nations, it will need a new role and a perspective appropriate to that role. Increasingly, it should be guided not by military strategic considerations, which are weak; nor by the arithmetic of economic interdependence, which will have become more optional; but rather by humanitarian motives, which have for too long been the orphan of U.S. foreign policy. With apologies for the source, more and more "the only viable motive for generous aid to poor nations is humanitarianism, with the same spiritual and psychic benefits to the donor that the individual enjoys when he gives to the poor in his community."¹⁸

2. The second element of strategy is to increase as rapidly as possible the number and complexity of links between the United States and the principal oil-producing exporters. Success in both substitution strategies and demand reduction will go a long way to solving the problem for the United States of excessive dependency on Saudi Arabia, Venezuela, Canada, and other major petroleum sources.

But that will not be enough; an additional strategy is needed that will tie the trading partners closer together and increase the stake the producers have in a sound U.S. economy. Their investments, both direct and portfolio, should be welcomed. So should special efforts at tourism, cultural exchanges, and other forms of mutual trade and contact. Increased dependence on U.S. supplies, machinery, spare

¹⁸Lincoln P. Bloomfield, In Search of American Foreign Policy: The Humane Use of Power (New York: Oxford University Press, 1974), p. 155.

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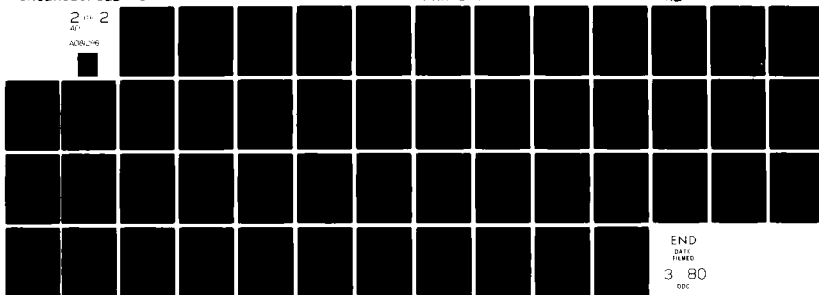
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parts, and expertise should be fostered.

Obviously, earlier caveats about "interdependence overload" apply here as well (danger signals are already flying at isolated spots of excessive Japanese penetration into the U. S. economy). But particularly in the light of forecasted balance of payment disequilibria, U. S. interests strongly support a deliberate policy that increases the mutuality of these relationships as quickly as possible.

Somewhat the same strategy might, incidentally, be studied for future U. S.-Chinese relations. We will be extremely dependent on a dynamically evolving Chinese giant not to destabilize Asia, and Eurasia as well. In exchange, a potentially enormous future Chinese market for U. S. goods, capital, and industrial and commercial know-how could be a major makeweight. The United States and Japan will be in a favorable position to equalize that balance.

3. A third element in a strategy of interdependence is to apply to alliance relationships the insights gained from analyzing the psychological aspects of dependencies. The "deficit areas" in the scale of interdependency between the United States and, say, Japan or Canada can be redressed to some extent by policy adjustments in the security and economic sectors. But there are natural limits to what can be done. What would seem to merit new policy attention are the less tangible but nonetheless potent psychological terms of the relationship. General de Gaulle's arrogance pained us; but it fostered an enhanced sense of self-esteem that helped to make Western Europe's asymmetrical dependency on the United States less visible and onerous than that of Japan and Canada.

To apply that insight to the underlying strain in, for example, U. S.-Japanese relations, such a strategy would give priority to U. S. policy steps following on President Ford's visit in November 1974, e. g., more prior consultation, greater deference to Japanese sensibilities on specific issues, encouragement of Japanese leadership in creating or strengthening regional economic organizations in Asia and Southeast Asia, assistance in obtaining a semipermanent seat in the UN Security Council, and encouragement in playing a UN peacekeeping role (outside Asia)--all accepted as deliberate efforts to remedy the otherwise tension-producing "dependency deficit." As for the Canadian case, I can only repeat my suggestion for a new and serious study of U. S.-Canadian relations in the light of my "deficit" and "overload" hypotheses, and one that takes psychological considerations into account.

It may be that the revised strategies sketched out here are inadequate to a genuine rectification of the major interdependency imbalances which I have argued are increasingly straining major U.S. relationships, and that more drastic solutions may be necessary. Lester Brown has recommended that the United States immediately adopt officially zero population growth as a national goal in order to make a genuine impact on the world food dependency situation.¹⁹ Our associate Vincent Ferraro suggests that oil and perhaps other forms of energy be treated as public or collective goods rather than private property to be disposed of through the usual profit and market mechanisms. Policy-planning on these issues should be encouraged to deal in highly unorthodox terms and to apply forecasting techniques to policy futures.²⁰

4. Many nationally managed functions are going to have to be collectively handled on the basis of joint policies, if they are to be resolved with any degree of effectiveness (although not necessarily efficiency). The two fundamental reasons for this are familiar. One is the sheer lack of "reach" available to industrial states today to maintain a reliable and equitable environment for such border-ignoring phenomena as currency, trade, investment, communication, nuclear security, environmental "commons," and the activities of worldwide corporate and other transnational enterprises.

The second reason, less often cited, is that purely national management of such problems inescapably implies, however tacitly, the traditional ultima ratio of force through recourse to what can be called the interstate war system. So long as national actors are the predominant decision-makers in the international system, each of these protean problem areas carries with it a potential time bomb that can be set off through a variety of factors, but over which the community as a whole still has very little control. From this growing systems obsolescence comes the powerful hypothesis that, to mitigate tensions caused by asymmetrical dependency situations around the world, greater-than-national structures, modalities, and agencies are

¹⁹ "The Next Crisis? Food," Foreign Policy (Winter 1973-74)

²⁰ For details see the author's The Foreign Policy Process: The Relevance of Theory (Sage Papers in International Relations, 1974)

required. Perhaps for the first time in history we are entitled to conclude that multilateral management of such problems is not a luxury but a necessity.²¹

This is in no sense a plea for increased powers for the organization known as the United Nations (although that may follow). Perhaps a variety of other kinds of structures are needed; as Simon Ramo once put it, man did not invent the automobile by breeding better and better racehorses. What it does call for is a joint commitment to problem-solving through multilateral means that far exceeds the commitment yet made by the United States and other major governments. If that results in strengthening the present United Nations family of agencies, well and good. If not, we should accelerate the planning and analysis required to usher in a new age of socio-political invention at the multilateral, transnational, and even supra-national level where that is the optimum rational solution. (Some of what follows is also echoed in the "convergent themes" Hayward Alker derives from the theoretical literature in Chapter II.)

Organizations of producers and/or consumers of petroleum are one fragmentary (and not necessarily desirable) example of the new imperative at work. There are already four such "adversary" organizations (OPEC²²; The Intergovernmental Council of Copper-Exporting Countries CIPEC, formed in Paris in 1968; the bauxite producers' organization organized in 1974, involving Guyana, Surinam, Sierra Leone, Jamaica, Guinea, Yugoslavia, and Australia; and the International Energy Agency formed in Washington on American initiative in February 1974).

The International Tin Council, which was formed in 1971 of twenty-seven members, includes seven producers, but the rest are consumers. This seems a more likely device for cooperative action than producers' cartels.

But beyond these partial organizational efforts, there seems to be growing agreement on the need for new "rules of the game" in the shape of norms to which nations would adhere in their interdependent relationships. A more positive, cooperative strategy for tension-

²¹Professor David A. Kay reminds me that dependency tensions can also on occasion arise between states and international agencies, as in the IMF-Brazil case of the late 1950s and early 1960s.

²²See Volume II.

reduction with respect to asymmetrical political-economic dependencies would aim at "codifying" interdependence by establishing new rules of conduct and codes of behavior, which would then be implemented or at the very least monitored by international organization machinery.²³

The minimum multilateral capability that is needed is for better information. One suggestion is for greater exchange of information with respect to agricultural production, stock, and price information in order to enable the United States better to respond to other countries' food needs.²⁴ Another is for forecasting and planning in the framework of a "distant early warning" economic intelligence system, to alert us to the stresses in the emerging global economic system so problems can be prevented from becoming panics.²⁵

Going beyond this is the notion that many of these problems require not just informational exchanges but actual collective management of problems.²⁶ There are already a few examples of international bodies easing the consequences of energy interdependence, e. g. World Bank and IMF, borrowing from OPEC countries and recycling the funds

²³See for example Miriam Camps, The Management of Interdependence (New York: Council on Foreign Relations, 1974), p. 100. The rules should perhaps include the notion of sanctions on nations that threaten the world economy by arbitrarily withholding raw materials, as suggested by Richard N. Gardner, in "The Hard Road to World Order," Foreign Affairs (April 1974), p. 566.

²⁴Lyle P. Schertz, "World Food: Prices and the Poor," Foreign Affairs (April 1974), p. 527.

²⁵Peter G. Petersen, "Preparing for the Future," New York Times, January 4, 1974.

²⁶Perhaps along the lines suggested by Richard Cooper when he warned that the advanced market economy countries must choose whether to move forward to new far-reaching forms of collective management of problems which they can no longer handle separately, or to put the brakes on their growing interdependence. (Cited by Miriam Camps in The Management of Interdependence, p. 43.)

by lending them to Third World countries. There are also several encouraging examples of collective action in the "common heritage" sector, for instance, the agreement by seven countries bordering on the Baltic Sea, which on March 22, 1974, signed a convention aimed at reducing its alarming pollution.²⁷ Other constructive multilateral steps being taken in the realms of environment, outer space, and the seas show that the balance sheet is by no means entirely negative.

Many suggestions are being made to bring the multinational corporation under better international control. For example, the Commission of the Economic Community on November 7, 1973, submitted a draft resolution to the Council of Ministers calling for a common economic policy toward multinationals. Recommendations for a permanent international commission on MNCs have been made by the UN "Group of Eminent Persons" that has been studying the impact of such corporations. The UN staff report they worked with suggested creation of a "center for multinational corporations" which would subject the MNCs to international screening and require them to observe certain requirements such as minimum disclosures, periodic reports, and disavowal of restrictive business practices. At a minimum, the staff suggested a code of conduct to be negotiated through the UN Economic and Social Council. At a maximum, they discussed codifying such guidelines and rules of conduct through a multilaterally negotiated charter and an international trade organization. They warned particularly against the danger that exists without a strong international authority in which disputes involving multinational corporations in host countries fall within national jurisdictions which are often inadequate or conflicting.²⁸

It remains an open question whether economic and monetary issues can best be dealt with at a global or regional or subregional level--or all three. The issues now requiring solution revive many of the same arguments that were thrashed out in two earlier eras of international organization construction, and many today feel that the

²⁷ New York Times, March 23, 1974.

²⁸ Multinational Corporations in World Development (New York: United Nations, 1973), pp. 93-94.

so-called functional approach is inadequate to the needs of this period.²⁹ Miriam Camps, in her intensive inquiry into this range of questions, concludes that "in the future, even more than in the past, the right central concept is that of 'one world. '" She defines the central task of the next decades as that of bringing the LDCs into the global system and making them fully functioning elements of the world economy, as part of the task of changing "the nature of the welfare and security responsibility from a particular, bilateral one to a general, multilateral one."³⁰ Speaking of the food problem, Secretary Kissinger seems in agreement that global level efforts are required, saying, "we strongly support a global cooperative effort to increase food production."³¹

Some recommended solutions are nothing short of drastic, e. g., converting the petroleum industry into a public utility, and even applying the same principle to all minerals in the ground. However, it is doubtless more realistic to concentrate on attacking individual problems at this time rather than seeking a new over-arching global design.

Two principles might be applied to this lesser approach. In the realm of economic theory, the "Tinbergen hypothesis" requires that the number of policy instruments be at least as great as the number of objectives, if all objectives are to be achieved,³² which could be interpreted to support a varied, multilevel approach. Also from the standpoint of realism, I have argued elsewhere that "fragments of community" can be organized topic by topic, through ad hoc action

²⁹"It has become clear that functional approaches outlined a quarter of a century ago are in many cases inadequate for developing the new integrated problems now required. . . .," Foreign Policy Decision Making: The New Dimensions (New York: UN Association of the U.S.A., 1973), p. 18.

³⁰Camps, The Management of Interdependence, pp. 71 and 77.

³¹UN General Assembly, Sixth Special Session, Department of State News Release, April 15, 1974.

³²As cited by Richard Cooper in The Economics of Interdependence (New York: McGraw-Hill, 1968), p. 153.

"coalitions of the willing," without waiting for universal agreement in sectors requiring early action.³³

Of equal importance is the capacity or incapacity of the U. S. government, notably the Department of State, to deal imaginatively and purposefully with these issues, many of which are unprecedented. In a sense, all contemporary governments are inadequately organized to deal effectively with contemporary problems.³⁴

The General Accounting Office recently urged that the Department improve its capabilities to deal effectively with energy-related problems.³⁵ Much the same could be said for upgrading the State Department's capacity to give policy leadership on a variety of other crucial international problem areas ranging from trade to monetary through ocean resources management and technology transfer, all of which still play a secondary role to the traditional regional structure and political-diplomatic primacy within the Department. At a minimum there should be a strongly enhanced capacity to perform "cross-sector" analysis of interdependence issues; this entails both research/analysis capabilities and an improved capability to the Department of State, and the Executive Branch generally, for anticipating crises and ensuring that the foreign policy system is better organized for the long pull.

The detailed organization of the State Department for more effective performance in an interdependent world is a topic requiring a separate research study. It might, however, be of some interest that one of the world's largest money managers, the Swiss Bank Corporation, recently reorganized itself from a country desk basis to

³³"Reviving the United Nations," New York Times, Op Ed page, July 21, 1971.

³⁴As Richard Gardner says, "perhaps the most difficult obstacle in the way . . . is the projection into the international organization of the fragmented system of 'portfolio government' that still characterizes most of the major countries. Governments will have to do a better job of coordinating themselves if the functional approach is to produce a coherent system of international institutions." "The Hard Road to World Order," p. 573.

³⁵Issues Related to Foreign Sources of Oil for the United States, Report to the Congress by the Comptroller General of the United States, January 1974, p. 3.

functional groups such as steel and energy.³⁶ But even more basic than organizational structure is the willingness of political leaders to lead in directions that a national orientation traditionally resists. One such direction is toward the give and take of dispute settlement in "interdependence" sectors through international arbitration and adjudication. Another is toward acceptance of multilateral decision-making on issues of collective concern even though such decisions will not always be identical with decisions based on the criterion of short-term national interest. It is only through such a commitment that U. S. policymaking and diplomacy can be brought into register with the kind of world that is developing.

Secretary of State Kissinger announced to the Special Session of the UN General Assembly in April 1974 that "the United States commits itself to a wide-ranging multilateral effort" along some of these lines and urged that we "transform the concept of world community from a slogan into an attitude."³⁷ The internal costs of acting on this injunction are high and perhaps still out of reach. Moreover, there is still the moral trap identified by Reinhold Niebuhr when he warned of "an increasing tendency among modern men to imagine themselves ethical because they have delegated their vices to larger and larger groups."

Above all, to deal in a purposeful way with problems growing out of stressful interdependencies--both economic and security--is actually to confront the international system as a whole. Interdependence refers properly to the particular dependencies for security, resources, trade, and investment. But when piled up as a whole it looks like a seamless web of connective tissue that is synonymous with the world order as a whole.

The foregoing analysis seeks to break out of that whole some specific policy element for possibly fruitful pursuit. Yet the conceptual framework such policies require is broad enough to encompass a new order of creative political and bureaucratic activity.

This is a great deal to ask of an ongoing system. Yet without it, the hazards implicit in present trends may ultimately transform economic interdependence into a problem of military security, dangerously closing the loop in the hitherto open circuit between the low politics of economic man and the high politics of nuclear strategy.

³⁶I am indebted to Lawrence Krause for this information.

³⁷Department of State News Release, April 15, 1974, p. 8.

APPENDIX A

A NOTE ON UNITED STATES NONFUEL MINERAL IMPORT PRACTICES

by

Ann Alker

There have been three basic trends in United States mineral production and consumption during the last 30 years.

1. While U.S. mineral production has increased, it has not kept pace with consumption and thus overall self-sufficiency has declined.
2. World mineral production has increased more rapidly than U.S. production with the result that the importance of the United States as a world supplier has decreased.
3. World mineral consumption has increased more rapidly than U.S. consumption with the result that the United States faces increasing competition for increasingly scarce resources.

These trends suggest a growing dependence on foreign sources, with the resulting negative effect on the balance of payments: the Department of the Interior estimates that the important bill for non-fuel minerals could rise to about \$44 billion by the turn of the century, or over seven times its present level. As world demand increases, reliability of foreign sources becomes an important question also.

Concern over these trends has been the focus of a number of recent studies which divide into two basic emphases: (1) that concerned with an overall global adequacy of mineral resources when measured against an exponential growth of demand, and (2) that concerned with political and economic problems associated with the United States' ability to secure adequate supplies in an increasingly competitive world market.

Doomsday literature, such as The Limits to Growth,¹ emphasizes the first of these concerns: the authors maintain that exponentially growth demand for limited natural resources can only result in serious shortages by the end of the century. Table 1 projects both linear and exponential growth rates of consumption of selected nonfuel minerals against known global reserves with pessimistic results. They argue that, for many minerals, the usage rate is growing even faster than the population since the average consumption per person is increasing each year. Referring to Column 5 of Table 1, it can be seen, using the exponential index (defined in the footnotes to Table 1), that out of the sixteen minerals analyzed, ten are projected to be exhausted before or shortly after the turn of the century. None of those remaining have a life of more than 100 years.

Critics of the scarcities viewpoint question the assumptions which lead to the conclusions outlined in Table 1. They contend that, as scarcities arise, mechanisms, such as price rises, technological improvements, and substitution will slow demand or increase supply.² It has been suggested that while absolute use of mineral resources is increasing, the intensity of use actually declines as a nation reaches a more advanced state of industrialization. Projections which illustrate this decline, most notable in the case of the United States, but also applicable to other developed countries are outlined in Table 2: the projections are based on changed intensity of use rates over the past twenty years. Following from these projections, Table 3 demonstrates that the United States' rate of growth of demand for these same minerals will be significantly lower than the rate for the rest of the world: while higher than that of the United States, the rate of growth of demand for other developed lands will be lower than that of the developing countries. These projections are based on the assumption that, as per capita income grows, requirement of each material per unit of output declines because: (1) there is a shift toward a service economy, (2) improvement

¹Donella H. Meadows, Dennis L. Meadows, Jørgen Randers, and William W. Behrens III, The Limits to Growth, A Potomac Associates Book (New York: Universe Books, 1972).

²See Carl Kaysen, "The Computer that Printed Out W*O*L*F*," Foreign Affairs (July 1972).

Table 1 Nonrenewable Mineral Resources

1	2	3	4	5	6
Resource	Known Global Reserves*	Static Index (years)*	Projected Rate of Growth (% per Year) * High Av. Low	Exponen- tial Index Using 5 Times Known Reserves (years)*	Exponen- tial Index Calculated Using 5 Times Known Reserves (years)
Aluminum	1.17×10 ⁹ tons ¹	100	7.7 6.4 5.1	31	55
Chromium	7.75×10 ⁸ tons	420	3.3 2.6 2.0	95	154
Cobalt	4.8×10 ⁹ lbs	110	2.0 1.5 1.0	60	148
Copper	308×10 ⁶ tons	36	5.8 4.6 3.4	21	48
Gold	353×10 ⁶ troy oz	11	4.8 4.1 3.4 ¹	9	29
Iron	1×10 ¹¹ tons	240	2.3 1.8 1.3	93	173
Lead	91×10 ⁶ tons	26	2.4 2.0 1.7	21	64
Manganese	8×10 ⁸ tons	97	3.5 2.9 2.4	46	94
Mercury	3.34×10 ⁶ flasks	13	3.1 2.6 2.2	13	41
Molybdenum	10.8×10 ⁸ lbs	79	5.0 4.5 4.0	34	65
Nickel	147×10 ⁸ lbs	150	4.0 3.4 2.8	53	96
Platinum Group ²	429×10 ⁶ troy oz	130	4.5 3.8 3.1	47	85
Silver	5.5×10 ⁹ troy oz	16	4.0 2.7 1.5	13	42
Tin	4.3×10 ⁶ lg tons	17	2.3 1.1 0	15	61
Tungsten	2.9×10 ⁸ lbs	40	2.9 2.5 2.1	28	72
Zinc	123×10 ⁶ tons	23	3.3 2.9 2.5	18	50

(Notes on following page.)

^a SOURCE: US Bureau of Mines, *Mineral Facts and Problems, 1970* (Washington, DC: Government Printing Office, 1970).

^b The number of years known global reserves will last at current global consumption. Calculated by dividing known reserves (column 2) by the current annual consumption (US Bureau of Mines, *Mineral Facts and Problems, 1970*).

^c SOURCE: US Bureau of Mines, *Mineral Facts and Problems, 1970*.

^d The number of years known global reserves will last with consumption growing exponentially at the average annual rate of growth. Calculated by the formula
exponential index = $\frac{\ln((r \cdot s) + 1)}{r}$

where r = average rate of growth from column 4
 s = static index from column 3.

^e The number of years that five times known global reserves will last with consumption growing exponentially at the average annual rate of growth. Calculated from the above formula with $5s$ in place of s .

Source: Meadows et al, The Limits to Growth.

Table 2--Selected Minerals--Intensity of Use, 1951-2000

	A. WORLD		B. UNITED STATES			C. OTHER DEVELOPED LANDS			D. POOR LANDS	
	1951-55	1966-69	2000	1951-55	1966-69	2000	1951-55	1966-69	2000	2000
Crude Steel mt (1,000)	124	152	135	157	136	85	128	185	164	121
Iron Ore t (1,000)	87	106	94	102	76	45	100	134	115	107
Copper mt	1,980	1,968	1,713	2,240	1,920	1,400	2,341	2,423	2,078	1,026
Aluminum mt	1,398	2,560	4,068	2,090	3,480	5,000	1,349	2,596	4,325	1,744
Zinc mt	1,335	1,372	1,170	1,480	1,230	900	1,602	1,653	1,341	1,043
Fluorspar mt	683	1,031	1,381	890	1,140	1,300	690	1,180	1,657	610

Note: Intensity of use given in unit per billion \$ of GDP.

Source: Wilfred Malenbaum, "World Resources for the Year 2000,"
The Annals (July 1973), p. 36. The projections are based on
changed intensity of use scales.

TABLE 3—Demand for Minerals, 1951-2000

	1951-55	1966-69	2000	ANNUAL RATE OF GROWTH (%)		ANNUAL RATE OF GROWTH (%)	
				1951-55 to 1966-69	1966-69 to 2000	1951-55 to 1966-69	1966-69 to 2000
B. United States							
Crude Steel mt (million)	210*	502	1,552	6.2	3.5	266	2.7
Iron Ore t (million)	147	352	1,086	6.2	3.5	141	1.6
Copper mt (1000)	3,345	6,511	19,693	4.7	3.3	4,389	2.5
Aluminum mt (1000)	2,361	8,467	46,761	9.2	5.4	15,675	7.4
Zinc mt (1000)	2,255	4,537	13,448	4.9	3.3	2,822	2.3
Fluorspar mt (1000)	1,153	3,409	15,870	7.8	4.8	4,076	5.5
D. Poor Lands							
Crude Steel mt (million)	105	324	1,048	8.1	3.6	238	8.2
Iron Ore t (million)	82	236	735	7.5	3.5	210	14.4
Copper mt (1000)	1,920	4,255	13,288	5.6	3.5	2,016	7.6
Aluminum mt (1000)	1,106	4,558	27,659	10.3	5.7	3,427	17.8
Zinc mt (1000)	1,314	2,902	8,577	5.6	3.3	2,049	12.1
Fluorspar mt (1000)	566	2,072	10,596	9.4	5.1	1,198	7.7

Source: same as Table 2, p. 38, 39.

of technology leads to more efficient use and more recycling, and (3) economic changes induce substitution.³

Another attempt to answer questions as to future demand is contained in a report of the Commission on Population Growth and the American Future.⁴ The report is based on a complex input-output model projected into the future under varying sets of assumptions as to demographic trends and overall productivity growth, determined by factors independent of raw materials supply.

Table 4 shows the results of these projections: "B" population is high population growth and "E" population is low. Within each of these assumptions as to population growth, projections are made for the use of each mineral under conditions of high and low economic growth. Comparison between these results and known reserves leads to the Commission's conclusion that projected cumulative demand to the year 2000 exceeds domestic reserves in almost all cases. They further conclude that cumulative savings of minerals from low population, low growth figures might be in the order of 27%-35% but that this saving would not accumulate substantially until after A. D. 2000.

The Meadows group stresses supply rather than demand considerations: they consider present versus future trade-offs as imperative. The Commission on Population Growth, on the other hand, believes that since shortages are not immediate (beyond 30 years) present versus future trade-offs are unrealistic, given the vast political and social implications involved. They feel that the discovery of new resources and new technology are more likely answers to projected shortages.

³The argument of declining intensity of use rates outlined here is drawn from a recent study by the National Commission on Materials Policy, March 1973, Materials Requirements in the United States and Abroad in the Year 2000, Wilfred Malenbaum, principal investigator. Consequently it probably represents current government thinking more closely than the "limits" viewpoint.

⁴U.S. Commission on Population Growth and the American Future, Population, Resources and the Environment, ed. Ronald G. Ridker, Vol. 3 (Washington, D. C., 1972).

Table 4 —Current and Projected U.S. and World Requirements for Principal Nonfuel Minerals under Various Assumptions as to Population and Economic Growth^a

Mineral, unit of quantity, and time period ^c		United States ^b				Rest of the world		World total	
		"B" pop.		"E" pop.		High	Low	High	Low
		High	Low	High	Low				
Iron (million tons)	1968	96				344		440	
	1969	100				n.a.		n.a.	
	1970	95				n.a.		n.a.	
	2000	219	180	197	161	758	537	977	698
	2020	432	314	337	243	1,242	709	1,674	952
	1968-2000	4,879	4,389	4,678	4,193	17,320	14,314	22,199	18,507
	1968-2020	11,293	9,325	9,966	8,222	37,164	26,778	48,457	35,000
Aluminum (million tons)	1968	3.8				6.4		10.2	
	1969	3.8				n.a.		n.a.	
	1970	3.7				n.a.		n.a.	
	2000	17.5	14.3	16.0	13.1	68	32	86	46
	2020	38.7	27.6	30.4	21.7	300	88	339	110
	1968-2000	302	268	292	259	878	533	1,180	792
	1968-2020	853	685	751	607	4,121	1,670	4,974	2,277
Copper (million tons)	1968	1.6				5.8		7.4	
	1969	1.7				n.a.		n.a.	
	1970	1.6				n.a.		n.a.	
	2000	4.0	3.2	3.6	2.9	34.9	16.8	38.9	19.7
	2020	8.1	5.8	6.3	4.5	107.8	32.8	115.9	37.3
	1968-2000	87	76	84	75	538	341	625	416
	1968-2020	206	166	182	148	1,867	827	2,073	975
Lead (million tons)	1968	0.8				2.6		3.4	
	1969	0.8				n.a.		n.a.	
	1970	0.8				n.a.		n.a.	
	2000	2.4	2.0	2.2	1.7	5.3	4.3	7.7	6.0
	2020	4.8	3.4	3.8	2.7	8.4	5.8	13.2	8.5
	1968-2000	47	42	46	40	124	110	171	150
	1968-2020	117	95	105	85	260	211	377	296
Zinc (million tons)	1968	1.5				4.0		5.5	
	1969	1.5				n.a.		n.a.	
	1970	1.3				n.a.		n.a.	
	2000	4.4	3.5	3.9	3.1	11.2	8.8	15.6	11.9
	2020	9.3	6.4	7.1	4.9	21.4	14.4	30.7	19.3
	1968-2000	85	75	80	70	233	201	318	271
	1968-2020	220	174	189	149	554	432	774	581
Manganese (million tons)	1968	1.2				7.1		8.3	
	1969	1.6				n.a.		n.a.	
	1970	1.6				n.a.		n.a.	
	2000	2.9	2.4	2.6	2.1	21.3	15.2	24.2	17.3
	2020	4.4	3.1	3.6	2.7	42.4	24.4	46.8	27.1
	1968-2000	70.0	62.9	65.8	59.7	428	351	498	411
	1968-2020	143.0	117.9	127.8	107.9	1,052	745	1,195	853
Chromium (million tons)	1968	0.4				1.5		1.9	
	1969	0.5				n.a.		n.a.	
	1970	0.5				n.a.		n.a.	
	2000	1.1	0.9	1.0	0.8	4.3	2.8	5.4	3.6
	2020	2.0	1.4	1.7	1.2	8.2	4.2	10.2	5.4

Adequacy of Nonfuel Minerals and Forest Resources

Table 4—Continued

Mineral, unit of quantity, and time period ^c		United States ^b				Rest of the world		World total	
		"B" pop.		"E" pop.		High	Low	High	Low
		High	Low	High	Low				
Nickel (million tons)	1968-2000	23.6	21.3	22.3	20.1	89	69	113	89
	1968-2020	53.8	44.2	48.5	39.8	212	138	266	178
	1968			0.16		0.3		0.5	
	1969			0.14		n.a.		n.a.	
	1970			0.15		n.a.		n.a.	
	2000	.44	.36	.40	.32	1.1	0.8	1.5	1.1
	2020	.89	.65	.75	.53	2.4	1.3	3.3	1.8
	1968-2000	8.8	7.9	8.3	7.4	20.4	16.3	29.2	23.7
1968-2020	21.8	17.9	19.5	15.9	54.2	36.7	76.0	52.6	
Tungsten (thousand tons)	1968			6.4		28		34	
	1969			7.8		n.a.		n.a.	
	1970			7.5		n.a.		n.a.	
	2000	41	34	37	30	70	55	111	85
	2020	125	94	108	76	122	84	247	160
	1968-2000	620	550	580	510	1,515	1,337	2,135	1,847
	1968-2020	2,160	1,750	1,940	1,520	3,410	2,715	5,570	4,235
Molybdenum (thousand tons)	1968			24		41		65	
	1969			25		n.a.		n.a.	
	1970			22		n.a.		n.a.	
	2000	120	98	107	87	196	145	316	232
	2020	361	259	299	213	522	317	883	530
	1968-2000	1,870	1,640	1,740	1,530	3,304	2,731	5,174	4,261
	1968-2020	6,350	5,030	5,570	4,410	10,131	7,208	16,481	11,618
Vanadium (thousand tons)	1968			5.5		11.2		16.7	
	1969			6.2		n.a.		n.a.	
	1970			10.0		n.a.		n.a.	
	2000	46.0	38.0	41.0	34.0	40	29	86	63
	2020	126.0	93.0	104.2	78.0	88	52	214	130
	1968-2000	760	670	700	620	744	617	1,504	1,237
	1968-2020	2,380	1,920	2,080	1,710	1,983	1,419	4,363	3,129
Cobalt (thousand tons)	1968			6.4		15.0		21.4	
	1969			7.5		n.a.		n.a.	
	1970			6.6		n.a.		n.a.	
	2000	17.8	10.9	15.8	9.9	28.0	20.5	45.8	30.4
	2020	34.7	14.9	28.7	12.9	41.5	25.0	76.2	37.9
	1968-2000	360	280	340	270	692	583	1,052	853
	1968-2020	880	540	780	500	1,386	1,039	2,266	1,539
Tin (thousand tons)	1968			66		211		277	
	1969			65		n.a.		n.a.	
	1970			60		n.a.		n.a.	
	2000	97	83	93	79	437	211	534	290
	2020	135	103	126	95	689	211	824	306
	1968-2000	2,520	2,320	2,460	2,270	10,238	6,948	12,758	9,218
	1968-2020	4,840	4,190	4,650	4,020	21,429	11,160	26,269	15,180
Magnesium ^d (million tons)	1968			1.2		4.1		5.3	
	1969			n.a.		n.a.		n.a.	
	1970			n.a.		n.a.		n.a.	

^aUnless otherwise indicated, projections for the United States are derived from a combined macroeconomic/input-output projection model of the U.S. economy. Quantity-conversion coefficients were applied to the constant-dollar values generated by the model for the appropriate input-output classifications. The coefficients are based on the quantity data for 1970 compiled by the U.S. Bureau of Mines and dollar-value data in the model for the same year. Except where there is no basis for distinguishing between primary and total requirements, the data for metallic minerals represent primary requirements only. For purposes of this table, relative recovery from secondary materials is assumed unchanged from 1970, except as otherwise noted. "Rest-of-the-world" projections are taken from U.S. Bureau of Mines, Mineral Facts and Problems, 1970. The Bureau made no specific world population assumptions, but the context indicates that assumptions as to economic growth, rather than population essentially accounted for the high-low range. The Bureau projected only to the year 2000; 2020 projections shown herein are by extrapolation at the 1968-2000 growth rate.

^b"B" and "E" refer to the high and low population variants used by the Population Commission. "High" and "low" refer to the respective assumptions as to overall rate of productivity growth used in the RFF projection model.

^cData for 1968, 1969, and 1970 are actual, as compiled by U.S. Bureau of Mines or derived from Bureau of Mines data. Other years projected. Cumulative totals include the year 1968 and are calculated on the assumption of a constant geometric progression--in most instances for the entire time period, but for the first five minerals for each decade, based on figures not shown in the table but derived from the RFF projection model. (For these minerals, the I-O classification system permitted relatively more reliable quantity conversions.) All data are in short tons.

^dProjections from U.S. Bureau of Mines, Mineral Facts and Problems, 1970. Since the population assumption in this source was similar to the "B" series of RFF, the high and low projections were taken as the "B-high" and "B-low" for this table. The approximate relative change caused by population differences in the consumption of other metals was used to estimate the "E-high" and "E-low" values.

Source: Population, Resources and the Environment, ed. Ronald G. Ridker, Vol. III of Commission on Population Growth of the American Future Research Reports, Washington, D.C., 1973, pp. 83-84.

The second emphasis in the concern over mineral shortages centers on the political rather than the physical aspects of supply. Central to this problem is the new sense of awareness on the part of producer nations that they own valuable and potentially scarce resources which should be conserved or controlled to a greater extent. Along with this is a questioning of the right of the United States, or 6% of the world's population, to consume such a disproportionate share of resources. For most nonfuel minerals this share runs between 25% and 50% (see Table 5).

Table 5 U. S. Consumption of Selected Minerals as Percent of World Total 1970

Aluminum	42
Chromium	19
Cobalt	32
Copper	33
Gold	26
Iron	28
Lead	25
Manganese	14
Mercury	24
Molybdenum	40
Nickel	38
Platinum Group	31
Silver	26
Tin	24
Tungsten	22
Zinc	26

Source: U. S. Bureau of Mines, "Mineral Facts and Problems 1970"

Since demand of other countries for minerals is growing faster than that of the United States, questions of competition for scarce resources arise and the consequent possibility of discrimination against the United States by foreign producers.

As dependencies on foreign sources increase, leverage of producing countries may have an adverse effect both on the U.S. balance of trade and the overall adequacy of supplies. Aside from the effect of rising prices on the balance of payments, a more serious problem may arise from producing countries' demands that more processing of mineral products be done within their territories: at present, the United States is able to mitigate an adverse balance of payments in minerals through exports of more highly processed mineral products. Adequacy of supply is threatened also by expropriations of foreign-owned mining facilities: ensuring adequate mineral resources becomes a problem of protecting U.S. foreign investment also.

Much of the recent concern over supply sources centers on the possibility of cartel actions similar to the recent case of oil. Fred Bergsten argues that the power of producing nations to form cartels and raise prices of many commodities is real and should not be underestimated.⁵ For cartelization to succeed, some minimum conditions must be satisfied however: (1) low long-run price elasticity of demand, (2) a willingness on the part of producers to act jointly and accept production controls, (3) a relatively few number of producers with similar expectations from collective action, and (4) few possibilities for substitution. While debate continues on the likelihood of the proliferation of cartels⁶ and while attempts to form agreements amongst producers continue, it seems that these conditions are not met by the majority of mineral resources and the prognosis for other OPECs is still in doubt.

In light of these current concerns, first with overall adequacy of resources and second with political and economic problems associated with overseas sources, official government policy on minerals will be

⁵C. Fred Bergsten, "The Threat From the Third World," Foreign Policy (Spring 1973).

⁶Zuhayr Mikdashi, Stephen D. Krasner, and C. Fred Bergsten, "One, Two, Many OPEC's . . . ?," Foreign Policy (Spring 1974).

examined. In response to a growing concern over the problem, the National Commission on Materials Policy was formed in 1970. Its final report⁷ reflects a policy basically dependent on the operation of the market: where product costs plus transportation are lower than domestic costs, foreign sources of supply are usually preferred. However, the Commission does offer some suggestions for mitigating some of the problems mentioned above:

- (a) Diversify supplies. The bulk of U.S. mineral imports comes from Canada, South Africa, Australia, and the less developed countries. The first three of these sources are considered relatively "safe" and reliance on them will continue. The Soviet Union is rich in some of the materials which the U.S. lacks and is thus considered a potential future source.
- (b) Explore the possibility of increasing producers' dependence on the United States. Here strategic considerations and U.S. exports become relevant. Since many producers, particularly among the less developed countries, are heavily dependent on mineral exports for foreign exchange, this may mitigate against interruption of supply.
- (c) Explore lead time for development of technology to increase domestic production or substitution. This is particularly important in the case of strategic materials. Substitution and recycling must be considered along with a definition of adequacy of supply.

U.S. policy, since it relies on market operations to such an extent, is probably geared more toward the first two of the above solutions than to a policy of self-sufficiency, at least in the short run. In an effort to protect foreign sources of supply, the Commission recommends working toward commodity agreements between producers and consumers and the exploration of possible methods of protecting foreign investment. (An international regime for this purpose is mentioned as a distant possibility.)

While the increased dependence of the United States on mineral imports has been emphasized, it should be stressed that this dependence is low when compared to other industrialized countries. The only example of greater self-sufficiency is that of the Soviet Union: this

⁷"Material Needs and the Environment Today and Tomorrow," Final Report of the National Commission on Materials Policy, June 1973.

long-standing policy involves domestic production at costs considered economically unacceptable in the United States.

While the United States in 1970 imported only about 15% of all raw materials, the Japanese are almost totally dependent on foreign sources for most of their raw materials. Japan has been forced to pursue a more aggressive search for foreign sources of supply, with government and industry working in close cooperation. Government assistance includes items such as long-term purchases, payments before delivery, supply or guarantee of risk capital, and long-term low-interest loans to supplier countries. The Japanese have been more willing than the United States to sponsor joint ventures with the host country acquiring a major share of the industry, have offered technical and financial aid in exploration, and are responding to host country demands that more processing be done within their borders. The Japanese have been actively seeking to diversify their sources of supply and it is interesting to note that the largest share of the mineral trade of the People's Republic of China is with Japan.

Some of the considerations relevant to problems of mineral demand and supply are presented in tabular form in Table 6. In those cases where there is an almost total dependency on foreign sources, they will be examined in greater detail with reference to overall supply (adequacy, substitution, and recycling) and supply from foreign sources (cartels, number of suppliers, industry structure.)⁸

⁸Principal sources for this section are: (1) U.S. Bureau of Mines, Mineral Facts and Problems (Washington, D. C.: 1970); and (2) Mining and Minerals Policy 1973: Appendices, Second Annual Report of the Secretary of Interior under the Mining and Minerals Policy Act of 1970.

TABLE 6

<u>Mineral</u>	<u>Annual Increase in U.S. Demand%</u>	<u>U.S. Imports 1972 % total consumption</u>	<u>Price</u>	<u>Principal Uses</u>	<u>Principal Foreign Sources for U.S. 1972</u>
Aluminum	6.5	96	rising	packaging; pipe consumer durables; transport; construction	Guyana, Jamaica Surinam, Austral: Canada ⁴
Antimony	4	65	fluctuate	flame retardant lead alloy	S.Af., Boliv., Mexico(ore)
Chromium	2.3 → '85	100	influenced by political factors	steel production electroplating	Rhodesia, S. Africa USSR, Turkey
Cobalt	1	98	fluctuate-upward trend. Infl. by stockpile	alloys; medical; weapons	Zaire, Zambia Norway, Finland
Copper	4	18	severe fluctuations	wiring, tubing	Canada, Peru, Chile
Fluorspar	3-4	87	rising	chemical industries steel	Mexico, Italy, Spain S. Africa
Gold	2	61	open market price rising sharply	jewelry coinage monetary standard	Canada
Iron	2.4	28	stable	steel	Canada, Venezuela
Lead	1.6	26	stable	metal compound; gas batteries	Canada, Peru Australia
Magnesium	6	5	stable	refractories pharmaceuticals	Canada Greece(non-metal)
Manganese	2	95	stable	steel production	Gabon, Brazil S. Africa, Zaire
Mercury	less than 1	58	dropping	elec. devices alkalies, chlorine	Canada, Mexico
Molybdenum	5	0	stable	alloying element	U.S. net exporter
Nickel	3	74	stable but rising	steel alloy electroplating	Canada, Norway
Phosphate Rock	4	> 1	stable	fertilizer	Neth. Antilles
Platinum Group	less than 2	100	rising with demand	mufflers; gasoline nitric acid pharmaceuticals	S. Africa, U.K. USSR
Silver	3-4	44	rising-responds to fluctuations	sterling; plate coinage; photog.	Canada, Peru
Tin	2.2	77	fluctuates but ITC has redetermined floor & ceiling price	steel coating packaging	Malaysia, Thailand Bolivia
Uranium	18 ²	12 ³	stable	nuclear fuel	Canada
Zinc	3	52	dom. price control; foreign higher, could rise	zinc alloys corrosion protection	Canada, Mexico

<u>Z from Re-cycling: 1971 or 72 figures</u>	<u>Substitution</u>	<u>Domestic Production</u>	<u>Proved World Resources⁵</u>	<u>U.S. Stockpile 1973⁸</u>
6 from scrap	Trend for alum. to sub. for other materials, copper at higher costs, steel where weight-saving not important	low grade but does supply line of retreat	ample ⁶	phasing out
60 from scrap	can be replaced			small surplus
12 from scrap	by zinc & alum. except in stainless	outlook at considerable price increase not favorable	ample	large
> 1 but potential higher	nickel/cobalt inter. subs.	v. small poss. except in case of underwater nodules	ample	well above objective
20	aluminum		30 years	objective is 0 small
	silver in some industrial applications		less 30 years	
33	improved tech. offers potential for use of domestic low grade ore	could meet demand from dom. sources but imports lower cost	ample	
35	plastic/alum. also using less in gas		less 30 years	objective is small objective is 0
> 1	no but less could be used in steel w/ tech advance	ocean has potential for satisfying total U.S. demand	ample	large
26	being done " high toxicity	dom. production dropping sharply	critical ⁷	large surplus
some but data incomplete	None		80 years	surplus objective is 0
34	supply exceeds demand at present none-demand exceeds supply at present		ample	
22	unlikely except in gasoline		ample	excess of objective
23			critical	surplus
24 potential is higher	aluminum		critical	large surplus objective reduced
insig. but future nuclear fuels will be reprocessed		production controlled by AEC		AEC stockpile large
5	aluminum magnesium		less 30 years	surplus

Source: (Unless otherwise indicated) Mining and Minerals Policy 1973 Appendices
Second Annual Report of the Sec: of the
Interior under the Mining and Minerals'
Policy Act of 1970

Footnotes:

1. These figures are taken from the 3rd Annual Report - 1974 (see above) the projections are until 1980 except where indicated.
2. This is dependent on the progress made in the use of nuclear fuels.
3. For enrichment and re-export of enriched uranium
4. From Canada in metal form only (otherwise sources are bauxite suppliers).
5. Source Donella H. Meadows et. al. Limits to Growth.
6. ample = 100 years or more
7. critical = 20 years or less
8. Source: 3rd Annual Report of the Sec. of the Interior under The Mining and Minerals Policy Act of 1970 - (1974).

Table 7 Aluminum--Reserves, Production, and Consumption: 1971
(thousand short tons metal)

	<u>Reserves</u>	<u>Mine Production</u>	<u>Primary Metal Production</u>	<u>Total Apparent Consumption</u>	
				<u>Metal</u>	<u>Nonmetal</u>
U. S. A.	13,000	512	3,925	4,125*	582
U. S. S. R.	63,000	990	1,300	1,250	
Canada	---	---	1,105	288	
Japan	---	---	985	1,250	
Norway	---	---	583	50	
Jamaica	168,000	2,815	---	---	800
Australia	840,000	2,765	246	150	
Surinam	150,000	1,656	66	---	
Guyana	20,000	1,010	---	---	
Guinea, Republic of	840,000	580	---	---	
Other	<u>374,000</u>	<u>4,068</u>	<u>3,129</u>	<u>4,812</u>	
World Total	2,468,000	14,396	11,339	11,925	1,382
U. S. A. 1972 Preliminary		500	4,122	4,543*	700

*Includes primary metal and scrap.

Source: Mining and Minerals Policy 1973, Second Annual Report of the
Secretary of Interior under the Mining & Minerals Policy Act
1970

Table 8 Aluminum--Major Sources of U.S. Imports: 1972
(thousand short tons metal)

	<u>Bauxite</u>	<u>Alumina</u>	<u>Metal</u>
Australia	60	630	---
Canada	---	10	500
Guyana	195	15	---
Jamaica	1,435	400	---
Norway	---	---	60
Surinam	735	305	---
Other	<u>255</u>	<u>180</u>	<u>233</u>
Total	2,680	1,540	793

Source: Same as Table 7.

A. Aluminum

Aluminum compounds are the most abundant metallic element in the earth's crust, and aluminum is the largest and fastest growing nonferrous metals' industry. At present, aluminum is produced primarily from bauxite, which yields the highest proportion of aluminum per unit, although other possibilities, such as clays, exist. The reduction process is highly energy intensive with considerable economies of scale. Eighty percent of total costs occur after extraction, and the location of smelters is not dependent on proximity to mineral reserves.

1. Sources of Supply

Tables 7 and 8 show the location of the principal reserves and production and the sources of U.S. imports of aluminum respectively. (The definition of reserves throughout this section is the portion of the identified resource from which a usable mineral can be economically and legally extracted at the time of determination and does not include potential resources, which in the case of aluminum are obviously much higher.)

Since production of aluminum does not have to take place at the source of supply, it will be noted from the Table that metal production may be highest in countries where reserves are low.

While foreign sources of supply have not been problematical in the past, the recent formation (March 1974) of the International Association of Producers of Bauxite (comprising Guinea, Australia, Guyana, Jamaica, Sierra Leone, Surinam, and Yugoslavia) has been coincidental with sharp price increases. In June 1974, the Jamaican Parliament approved an 800% increase in taxes paid to its government by the six U.S. and Canadian aluminum companies operating in Jamaica. The Kaiser Company has already indicated an interest in selling its Jamaican lands due to this price rise.

Since the existence of aluminum compounds is so widespread, potential cartel action may be limited, however. Embargo would result in the use of alternate sources and price increases must be measured against the potential production of aluminum from sources other than bauxite. The Producers Association does have leverage in demanding that more of the processing be done in the producing country. The participation of Australia in the group must be noted. Australia alone could probably supply Western industrialized nations with bauxite for

the next 100 years but her alliance with other producers, even though a moderating influence, raises potential questions about what has been considered to date as a "safe" source. In 1971 total mineral exports accounted for only 26% of Australia's total exports. Since she is less heavily dependent on a single commodity in her export trade than many developing countries, this suggests that Australia might be willing to go along with some of the demands of other producers. In turn, however, the degree of their demands must be measured against their heavy reliance, as in the case of Jamaica, on a single commodity in the export market.

2. Uses and Alternatives to Imports

Aluminum has a wide variety of uses in construction, all forms of transportation, electrical uses, consumer durables, and packaging. Its rate of use has been rising at the expense of other metals because of substitution. Principally it has been replacing copper and also tin in packaging. Strategic problems are not considered critical because of widespread potential sources. The development of new reduction processes using aluminum-bearing clays offers potential for increased domestic production during the 1980s. The Soviet Union is already extracting aluminum from materials other than bauxite and in the face of rising prices, the Soviet bloc might become a competitor in world production. The Reynolds Metal Company is currently conducting test production on domestic laterites:

Current economics do not favor a switch to laterite at this time, but it is reassuring to know that we could change overnight if the bauxite cost and supply situation should warrant such action.⁹

Bureau of Mines research is also underway on extracting aluminum from domestic clays; however, environmental problems of waste disposal and land use must be considered along with potential domestic production.

⁹Richard S. Reynolds, President, Reynolds Metal Company, quoted in the New York Times, March 7, 1974. These tests were conducted to coincide with the meeting of the principal bauxite producers mentioned above.

3. Industry Structure

The aluminum industry has been highly concentrated in the hands of a few large companies. The production process is vertically integrated, resulting in near monopoly conditions, although the recent Jamaican price increase, which will probably be reluctantly accepted by the companies, suggests that as in the case of oil the producer governments rather than the companies may soon be setting prices. The high rate of capital investment necessary at the production stage is the primary reason for this oligopolistic situation. In 1967, 60% of the world primary capacity (and 80% of non-Communist world capacity) resided in the following six companies: Alcan (Canada); Alcoa, Reynolds, Kaiser (all U.S.); Pechiney (France); and Alusuisse (Switzerland). The operations of Alcan in Guyana were nationalized in 1970 and talks are currently being conducted with Reynolds that could lead to a similar outcome. However, capital demands make serious competition questionable at this point, although Jamaica, Guyana, and Trinidad recently announced plans to operate a jointly owned smelter. Since production of aluminum from other materials does not require a change in capital equipment, the continued domination of these companies is likely.

B. Chromium

1. Sources of Supply

At present the U.S. imports all the chromium it consumes and this is expected to be the case until the end of the century. Table 9 shows the reserves, production, and consumption of chromium by country: it can be seen that South Africa has by far the largest known reserves, followed by Rhodesia and the Soviet Union.

Table 9 Chromium--Reserves, Production and Consumption 1971
(thousand short tons metal)

<u>Country</u>	<u>Reserves</u>	<u>Mine Production</u>	<u>Total Consumption</u>
U. S. A.	0	0	379
South Africa, Rep. of	100,000	560	NA
Rhodesia	20,000	134	NA
Turkey	1,000	216	NA
Finland	1,000	37	NA
Philippines	800	115	0
Other Free World	1,000	277	327
U. S. S. R.	8,000	684	250
Other Communist Countries	600	161	161
Europe	*	*	690
Far East	*	*	270
World Total	132,000	2,184	2,077
U. S. A. 1972 Preliminary		0	420

* Included in above

NA = Not Available.

Source: Mining and Minerals Policy 1973: Appendices

Table 10 shows the major sources of U.S. imports for 1971 and 1972.

Table 10 Chromium--Major Sources of U.S. Imports
(thousand short tons)

	<u>1971</u>	<u>1972</u>
U. S. S. R.	136	112
South Africa	129	129
Turkey	103	103
Other	<u>36</u>	<u>59</u>
Total	404	403

Source: Mining and Minerals Policy 1972: Appendices
Mining and Minerals Policy 1973: Appendices

Barring further dislocations in supply sources, such as the trade embargo against Rhodesia, future foreign supplies are considered adequate until 2000. In 1972 the United States began to import Rhodesian chromium once again, in spite of continued UN sanctions, although a pending Congressional vote may reimpose this ban. Presently the U.S.S.R. is the largest producer of chromium and a significant source of supply. For obvious political reasons cartel action is unlikely and direct U. S. interests in African mines are considered safe.

2. Uses and Alternatives to Imports

Since chromium is used in steel production, it is considered to be an important strategic material. Major uses are in transportation, construction products, and machinery. The government maintains a large stockpile for emergency uses, and air transportation from sources is a possibility in the event of an emergency which would threaten supply lines. Domestic production ceased in 1961 and domestic resources are not considered as reserves at present because of high costs associated with production. More advanced technology is needed as is more research on substitution of other more plentiful materials.

C. Cobalt

1. Sources of Supply

For this metal, supply sources are considered to be potentially hazardous. In 1971 one firm, Union Minière de Haut Katanga, now nationalized by the Zaire government (formerly Kinshasa), accounted for over one-half of the world's total production. It should be noted from Table 11 that New Caledonia and Australia contain large reserves and could become a potential source.

Table 11 Cobalt--Reserves, Production, and Consumption: 1971
(short tons metal)

	<u>Reserves</u>	<u>Mine Production</u>	<u>Total Apparent Consumption</u>
U. S. A.	28,000	W	6,770
Canada	193,000	2,496	NA
Morocco	14,000	1,078	NA
New Caledonia and Australia	740,000	350 e/	NA
Zambia	383,000	2,293	NA
Zaire	750,000	14,800	NA
Other Free World	25,000	1,400 e/	NA
Communist Countries (except Yugoslavia)	597,000	3,450 e/	NA
	<hr/>	<hr/>	<hr/>
World Total	2,730,000	25,867 e/*	28,570 e/
U. S. A. 1972 Preliminary		-0-	7,000

e/ = Estimate

NA= Not available

W = Withheld--company confidential

* = U. S. A. not included

U.S. reserves are 1% of acknowledged world reserves.

Source: Mining and Minerals Policy 1973: Appendices

Sources of U.S. imports in 1971 and 1972 were as follows:

Table 12 Cobalt--Major Sources of U.S. Imports
(short tons metal)

	<u>1971</u>	<u>1972</u>
Bel-Lux*	1,515	1,971
Norway	400	499
Canada	455	-
Finland	604	684
Zaire	2,286	2,360
Zambia	-	584
Other	<u>196</u>	<u>746</u>
Total	5,456	6,844

*Through Belgian refineries from Zaire.

Sources: Mining and Minerals Policy 1972: Appendices
Mining and Minerals Policy 1973: Appendices

Price and supply are highly dependent on Zaire's production. In 1971, however, minerals represented 80% of Zaire's total exports, which makes her highly dependent on mineral exports for foreign exchange.

2. Uses and Alternatives to Imports

Because of its military uses, primarily in the manufacture of aircraft and weapons, cobalt is considered to be an essential strategic material. It is one of the few materials where U.S. demand is expected to increase at a higher rate than that of the rest of the world. Consequently, a relatively large stockpile is retained although the objective was sharply reduced in 1973. Other principal uses are in electrical equipment, chemical products, paint, and machine tools. Known domestic resources that might be exploited at any practical price increase are not large enough to be a significant factor in supply. However, better methods may become available to separate cobalt from nickel and also from scrap; this would increase potential foreign sources also. The most likely potential domestic source appears to be from ocean mining since large quantities of cobalt are present in manganese nodules.

3. Industry Structure

Monopoly pricing exists because of few sources of supply; price is also influenced by the U.S. stockpile. The industry is vertically integrated to the metal stage.

D. Manganese

1. Sources of Supply

Foreign sources of manganese are sufficiently well distributed so that supplies do not appear threatened, barring a major crisis.

Table 13 Manganese--Reserves, Production, and Consumption: 1971
(thousand short tons metal)

	<u>Reserves</u>	<u>Mine Production</u>	<u>Total Consumption</u>
U. S. A.	-0-	38*	1, 170
Brazil	50, 400	1, 323	NA
Gabon	105, 000	1, 050	NA
India	11, 200	785	NA
Republic of South Africa	50, 400	1, 457	NA
Other Free World	177, 000	1, 373	NA
Communist Countries (except Yugoslavia)	252, 000	3, 972	NA
	<hr/>	<hr/>	<hr/>
World Total	646, 000	9, 998	NA
U. S. A. 1972 Preliminary		30*	1, 260

NA = Not available

* = Includes manganiferrous ore and manganiferrous zinc residuum.

Source: Mining and Minerals Policy 1973: Appendices

The major sources of supply for the United States in 1971 and 1972 were as follows:

Table 14 Manganese--Major Sources of U. S. Imports
(thousand short tons metal)

	<u>1971</u>	<u>1972</u>
Brazil	335	225
Gabon	315	315
South Africa	173	175
Zaire	-	125
Other	<u>314</u>	<u>360</u>
Total	1,137	1,200

Source: Mining and Minerals Policy 1972: Appendices
Mining and Minerals Policy 1973: Appendices

The United States will probably continue to depend on these sources. The Soviet Union also contains large reserves. Other high-grade deposits occur in a relatively large number of countries in virtually all parts of the world. Australia, also, is a potential producer. Thus prices are expected to remain stable with little possibility for cartel action.

2. Uses and Alternatives to Imports

Manganese is an essential ingredient of steel production and thus its rate of consumption closely parallels that of steel. Presently there is no substitute although improved technology might lower the amount needed per unit of steel. The most likely potential for domestic production is ocean mining of manganese nodules. The possibilities for their exploitation are currently under intensive U. S. and foreign investigation although seabed legislation must be ratified before mining could begin.

E. Tin

1. Sources of Supply

The United States relies almost solely on foreign supplies for its primary consumption of tin. The relatively low figure of 77% of total imports as percent total consumption (see Table 6) occurs because of the high proportion of recycled tin in use.

Table 15 Tin--Reserves, Production, and Consumption: 1971
(long tons metal)

	<u>Reserves</u>	<u>Production</u>		<u>Total</u>
		<u>Mine</u>	<u>Smelter</u>	<u>Consumption</u>
U. S. A.	9,000	W		69,950 <u>1/</u>
Australia	81,000	9,365	6,233	4,500
Bolivia	325,000	27,441	7,116	80
Indonesia	550,000	19,411	9,260 <u>e/</u>	300
Malaysia	600,000	74,253	85,719	270
Nigeria	86,000	7,005	7,243	80
Thailand	1,400,000	21,346	21,336	80
Zaire	140,000	6,400 <u>e/</u>	1,330 <u>e/</u>	100
Other Free World	278,000	15,312	39,384	108,040
U. S. S. R.	210,000	28,000 <u>e/</u>	28,000 <u>e/</u>	34,000
Other Communist Countries	505,000	21,000 <u>e/</u>	21,200 <u>e/</u>	25,000
World Total	4,184,000	229,533	226,821	242,400
U. S. A. 1972 Preliminary		W	NA	67,000

W = Withheld--company confidential

e/ = Estimated

1/ = Includes 17,970 tons recycled

U. S. reserves are an insignificant portion of acknowledged world reserves.

Source: Mining and Minerals Policy 1973: Appendices

Major U.S. sources of supply are as follows:

Table 16 Tin--Major Sources of U.S. Imports: 1972
(long tons metal)

Malaysia	33,200
Thailand	12,000
Bolivia	4,600
Other	<u>1,800</u>
Total	51,600

Source: Mining and Minerals Policy 1973: Appendices

As Australian production increases, this could become a potential source for the U.S. market.

Since production of tin has, in the past, tended to be maintained even when prices fell, producers formed the International Tin Council primarily to try to maintain price stability. The Council is unique in that it is an association comprising both producers and consumers. Its goal of maintaining price stability has been successful to some extent, although the United States, which chose not to join, also can influence prices through its large stockpile. Another potential threat to the Council is the People's Republic of China, which is not a member but whose reserves could be the largest in the world. China has already begun to export tin to the West. Although the Tin Council has had success in managing prices, the many possibilities for substitution by other metals would inhibit the possibilities for embargo or production cutback. However, a temporary export control was enforced by the ITC in 1973 in an effort to bring world production and consumption into balance. The major tin exporters are highly dependent on tin revenues and feel threatened by increasing substitution of materials such as plastics and aluminum.

2. Uses and Alternatives to Imports

The only major potential source of domestic tin is Alaska, but recovery would be at prices well above foreign sources. Almost 35% of tin consumption occurs in the manufacture of metal containers and this is increasingly being replaced by plastics and aluminum. Other

uses such as electrical and plumbing are also open to substitution. These factors combined with a high secondary use rate make the projected growth rate for tin consumption considerably lower than for other major metals.

3. Industry Structure

There are many tin production companies and the industry is not vertically integrated. While large investments are required for production facilities, it is not a monopoly situation and the companies themselves have not been able to control prices.

Conclusions

1. Projections as to future demand and supply of nonfuel minerals must be open to question when they depend on assumptions based on current rates of growth of demand, current technology, and currently identified resources. Since major scarcities are not expected to occur for another thirty years and since, to date, mineral prices have remained relatively constant and consumption patterns in the United States relatively close to a "nonshortage" situation, responses to upward price changes remain untested for the most part.

Future projections should be made using various assumptions and adjustments mechanisms such as new technology (discovery of new reserves, substitution, and recycling), price increases, etc. Definition of adequacy becomes crucial also: the concept of adequacy may change under different price structures and substitution patterns, and conservation may become more salient. Currently the government is still reluctant to talk about a reduction in demand.

2. Sources of supply do not appear seriously threatened at the present time. In most cases foreign sources are sufficiently diverse to counter possible cartelization. Perhaps the most seriously threatening at this time is the case of bauxite, but potential for domestic production puts a ceiling on foreign price increases or interruption of supply.

The extent and implications of U.S. reliance on "safe" sources must be noted. By far the largest single foreign source of nonfuel minerals is Canada. In 1970 over half the total direct private investment of the United States in foreign mining was in Canada. In 1971 metals accounted for 27.6% of Canada's total exports (40% if fabricated

metals were included). In the same year 59.4% of these exports went to the United States.

Any future change in this trade relationship would be crucial to U.S. metals supply. Australia is also a major supplier and is expected to become increasingly so, as indicated by the data on reserves. Thus the extent to which she cooperates with other producers, such as in the current bauxite negotiations, must be of key interest to the United States. Japan is a strong competitor for Australian minerals and presently a larger share of Australian production of bauxite goes to Japan than to the United States.

South Africa is considered another "safe" source of supply. Mounting pressure by the world community against South Africa is at odds with U.S. policy, which reflects a recognition of South Africa as a key supplier of minerals. As was noted earlier, the United States, in line with this policy, has begun to trade with Rhodesia again in the face of continued UN sanctions. Indications of impending Congressional legislation to reimpose this ban also raises the possibility of a stiffening attitude toward apartheid. The Jackson amendment to the 1974 trade legislation is an indication of Congressional intention to tie trade legislation to an attempt to exert leverage over internal affairs of other countries on moral questions. Since the Soviet Union is consistently cited as a possible future source of mineral supplies, Congressional opinion on this subject becomes potentially salient to future supply sources.

3. The seabed is now considered an important potential source of mineral supply, particularly in the case of cobalt, nickel, copper, and manganese. Since cobalt and manganese are not produced domestically and since cobalt is an example of a mineral where the United States might experience serious threat in its source of supply, the effect of minerals policy on U.S. attitude toward seabed legislation becomes crucial. It is interesting to note that while the United States continues to support its traditional position of freedom of navigation of the seas, a two-hundred-mile economic zone has already been accepted as part of the United States' position on possible seabed legislation.

4. President Nixon's "Project Independence" is currently not applicable to U.S. minerals policy: reliance on foreign sources of supply is gradually increasing and in the case of most minerals, stockpile objectives are being lowered. Protection of supplies relies on diversification rather than resorting to higher priced domestic substitution. A domestic strategy is further handicapped by increasingly

stringent environmental constraints and the rising cost of energy. Neither has Project Interdependence yet had a major regime-building impact.

A deteriorating balance of trade in minerals may still be countered by continued higher order processing to which the United States' lead in technology is well suited. It must be remembered, also, that the United States, relative to almost all industrialized countries, is well endowed with many nonfuel minerals: the percentage of imports to domestic consumption is relatively small and sources of supply, for the most part, are not critical at present.

APPENDIX B

SOME PSYCHOLOGICAL CONSEQUENCES
OF INTERNATIONAL DEPENDENCY

by

Steve R. Pieczenik, M. D. *

Clues From Behavioral Literature

As the reality of global interdependence becomes more apparent, the need for psychological clarity of the dependency phenomenon becomes imperative. The nature of a dependent relationship, whether individual or national, has never fully attained the sanction of scholarly research. The psychological and political science literature reflect the different traditions of thought, ranging from pathological to cybernetic models, each, however, subsuming the importance of dependency under a different category.

For the Freudian analysts, dependency is significant only as it is defined in different pathological states, such as depression, or as part of the normal psychosexual developmental process. In speaking of oral dependency or deprivation, one has the sense that dependency connotes a feeling of vulnerability wherein the child lacks any clear behavioral options other than being nurtured or being deprived.¹

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¹The Psychoanalytic Study of the Child (Rockville, Md.: National Clearinghouse for Mental Health Information, 1973).

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Similarly, the Kleinian analysts emphasize the importance of pre-oedipal dependency as crucial determinants for the formation of defense mechanisms of introjection and projection as well as the personality formation of paranoid-schizoid and depressive disorders.² Clearly marked in this concept of dependency is its developmental importance as symbolized by the relationship of the "good" and "bad" mother to the oral-dependent child. Here, with the introduction of "good" and "bad," the qualitative aspects of the dependent relationship become more clearly focused, albeit inchoate. A good dyadic relationship denotes a previously "good" dependent-nurturant experience, whereas, a wanting relationship denotes the converse.

The formal values, attitudes, and expectations of a dependent relationship are more clearly explored in the school of social psychology called Role Theory. The language of dependency is transmuted into "matrices of possible interactions and outcomes," with the dynamics of the relationship explained as "an interference and facilitation in interaction."³ Consistent with this line of reasoning are the theories of international relations that discuss dependency or interdependency as functions of economic-political-military coalitions and alliances usually operating on the principle of non-zero sum games.⁴

The Group Theory literature offers some interesting insights into the nature of international bargaining and coalition formation, but ignores discussion of the possible problems of dependency that might arise in the formation of these coalitions.⁵

²Harry Guntrip, Psychoanalytic Theory, Therapy, and the Self (London, Hogarth Press, 1971), pp. 145-73.

³Bruce J. Biddle and Thomas J. Edwin, Role Theory: Concepts and Research (New York: John Wiley and Sons, 1966).

⁴Ole R. Holsti, Terence P. Hopmann, and John D. Sullivan, Unity and Disintegration in International Alliances: Comparative Studies (New York: Wiley InterScience Publication, 1973), pp. 52-84.

⁵Herbert Kelman, International Behavior (New York: Holt, Rinehart and Winston, 1965), pp. 464-521.

For the most part, the psychiatric, social psychology, and international theory literature can be dovetailed into a body of knowledge that ostensibly recognizes the phenomenon of dependency, but for reasons of omission or restraint does not analyze either the psychological dynamics or psychological consequences of dependent or interdependent relationships. Exception to this harsh generalization is the body of literature concerning the discriminatory problems of inequality, either arising from imperialism or from sexual differences. The colonial oppression (dependencia) literature is polemical in style and normative in substance.⁶ The orientation is basically one of Marxist economics combined with moral indignation. These writers do, however, underline the detrimental psychological consequences (low self-esteem, distorted self-image, increased frustration, and alienation) of a political-social dependency. Their proposed solution is usually one of sudden violence and revolution with the expected redress of self-image and autonomy. Rarely are the changes so dramatic in real life; in part, because behavioral change in general is not by nature dramatic (as explained by theories of unconscious determinism, conditioned behavior, and political socialization); and, in part, there are always unresolved feelings and attitudes in dependent relationships that are often recognized, rarely analyzed, and hardly ever modified, even by the broadest of political gestures.

From the aforementioned literature, in particular the literature on sexual inequality,⁷ one can glean several propositions about the dynamic characteristics of the dominant and subordinate members in the dependent relationship. One may, while remaining wary of generalizations, and aware of the difference in the levels of analysis, apply these propositions to clarify the nature of international dependency.

⁶Franz Fanon, The Wretched of the Earth (New York: Grove Press, 1963), pp. 27-75.

⁷Jean B. Miller and Ira Mothner, "Psychological Consequences of Sexual Inequality," American Journal of Orthopsychiatry 4 (October 1971), pp. 767-75.

Interpersonal Propositions With Foreign Policy Illustrations

To begin with, one may accept the notion that the keystone feature of a dependent relationship is its asymmetry, as perceived by at least one of the involved parties. In part, the perception of the asymmetry involves the notion that one of the members is in fact (or in fantasy) the dominant one, as defined by power, status, prestige, resources, and the other is subordinate. This inequality characteristically generates irrational affects (anger, envy, jealousy) and irrational attitudes that spiral into a counterproductive relationship of unfulfilled needs and unrealistic demands. Even the guise of legitimacy cannot mitigate these affective intrusions into the rational calculus of a potentially mutual exchange. Such power to distract and direct attention and energy away from the main goals and to undermine the basic trust belongs to the dynamics inherent in the inequal relationship. The following propositions are advanced in an attempt to characterize the nature of the inequality and the psychological consequences of such inequality. The evidence indicates that in interpersonal relationships this type of situation occasionally leads to overt conflict, but more often is played out in a continuing covert conflict. The latter entails hostile dependency, sado-masochism, and sometimes eventual mutual self-destruction. At this stage of research these propositions are only clues for a heuristic understanding of international dependency. The propositions, as stated, are derived from the behavioral literature and each will be followed by an illustration of its application to international affairs.

Proposition 1 In a dyadic relationship the dominant member often provides to the subordinate member an acceptable role for his self-definition. The designated role incorporates those aspects of the relationship that are considered inferior in value and prestige (ranging from menial worker to intellectual sycophant). Psychologically, the designated roles foster submissiveness coupled with guilt, self-anger, and rage. Witness the American foreign aid program that designates many recipients as "underdeveloped" or "LDC" (lesser developed countries) to see evidence of their gratitude in now classic graffiti, "Yankee, go home!"

Proposition 2 The dominant member disguises the true nature of the inequality by rationalizing the differences as a fait accompli and insinuating himself as the desirable role model. Initial subordinate acquiescence ensues, coupled with developing mistrust,

resentment, and envy. Feelings of frustration and despair follow the realization that one's growth has been impaired. From the Wilsonian crusades to the Nixon doctrine, the United States has offered itself, at times unwittingly, as the exemplar of nation-state behavior, continuously reaffirming moral and ideological rectitude and technological superiority. In turn, our major allies appear mistrustful, wary of what, if any, role they will play in the major balance of power. U. S. initiatives to implement détente, as well as the recently successful mediation attempts after the Yom Kippur War, have been trailed by Western European cries of outrage, contempt, and abandonment.

Proposition 3 The dominant member maintains the asymmetric relationship in order to foster subordinate dependency and to reaffirm his own feelings of self-worth and self-importance. In turn, the subordinate member suppresses the overt expression of his accumulated resentment in order to obviate a futile confrontation. The nature of U. S. relations with the Latin American countries is expressed in these terms in the so-called dependencia literature. Any U. S. assistance or aid, no matter how well intended, is viewed as a political-economic stratagem specifically designed to reinforce the dependent relationship. Evidence of the accrued resentment was present in the paroxysms of revolutionary rhetoric in Allende's Chile and Peron's Argentina.

Proposition 4 The dominant member uses idealization and praise to subtly devalue the subordinate member. By elevating those features which the subordinate member feels are nondescript or non-self-serving, the dominant member effectively deprecates those aspects of the subordinate that would lead to an equalization of the relationship. Recent U. S. paeans to newly discovered Arab culture and friendship avoid mention of such attributes as initiative, industry, temperance, and self-reliance in lieu of the designation of "favored recipients" for advanced U. S. technological assistance.

Proposition 5 The dominant member determines both the emotional and behavioral tones of the dependent relationship. In international affairs, the dominant member intrudes its political culture, including its ethos, morality, and social theory; again, in order to legitimize the relationship, it does so by allowing the subordinate member to incorporate aspects of the dominant culture. Clear evidence is the pandemic fear abroad of losing one's culture to the impending peril of "Americanization."

Proposition 6 Consciously or unconsciously, the dominant member orchestrates a scenario of covert conflict. The claim of common interest is invoked as the rationale to avoid cause for conflict. One also observes a tightening of constraints in an already established dependent relationship which may appear too lax. In the international arena, the South Vietnamese and the Thais were designated U. S. allies during the Vietnam War to share in the burden of fighting. The price of maintaining that dependent friendship was both costly and emotionally taxing, as evidenced by the subsequent recalcitrant behavior and internal disruptions, often directed against the United States (e. g. , student revolts, in one case overthrowing the government).

The subtle complexities of a dependent relationship become more evident if one elucidates the characteristics of the subordinate member. In general, the subordinate member has a harder time coping with the imposed mores and constraints of a dependent relationship than the dominant member has of maintaining them.

Proposition 7 The subordinate member is primarily concerned with his psychological, cultural, and physical survival. Accordingly, direct, honest reactions to the constraints of the dominant member or to the destructive treatment is scrupulously avoided. Direct, open action in self-interest is muted, if not totally suppressed. On the national level, one can see this characteristic in the female syndrome of "fear of success," where feminine assertion to compete on the open market often means social ostracism, psychological isolation, and economic hardship.⁸ An example of political "self-destruction" is the recent resignation of the Greek military junta after having defied the seven-year constraints of the United States and NATO dependency relationship by masterminding the Greek Cypriot coup.

Proposition 8 The subordinate member, because of his inability to assert himself openly, must resort to deception and manipulation as the primary styles of behavior. This often assumes the skillful guise of good humor or egregious self-deprecation, intended

⁸Miller and Mothner, "Psychological Consequences of Sexual Inequality."

ultimately to devalue the dominant member. Black or Jewish ethnic jokes of obsequiousness are a genre of humor that reaffirms the subordinate's ability to critically laugh at himself while surreptitiously manipulating the dependent relationship. De Gaulle, a master of grandeur and manipulation, knew well the art of appearing agreeable while manipulating to his advantage the inherent weaknesses of the superpowers (often playing them off one against the other).

Proposition 9 Through the defense mechanism of identification with the "aggressor" (the dominant member), the subordinate member may appear more dominant than the actual dominant member. The subordinate member incorporates and identifies with the values of the dominant member that appear repressive, as a way of minimizing his own feelings of inadequacy, impotence, and rage. In an alternative role reversal situation where the subordinate member becomes the dominant member, those initial repressive attributes are hypertrophied in magnitude and displaced onto the newly created subordinate member.⁹ In the field of international industrialization and economics, the Japanese have out-Americanized the Americans. Unfortunately, this phenomenon has occurred at certain psychological expense to the Japanese culture as evidenced in the reactive resurgence of episodes of Samurai militarism. But, witness their role reversal from subordinate to dominant vis-à-vis Taiwan, the Philippines, and Southeast Asia, where they are seen as operating an oppressive economic imperialism.

Proposition 10 The subordinate member is more cognizant than the dominant member of the true nature of the dependent relationship. He understands that the underlying weakness of the dependent relationship resides in the dominant member's basic inability to satisfy the subordinate's demands, no matter how valiant the effort. The subordinate member, then, uses this insight to further weaken the dominant member, by covertly spiraling demands and expectations which the dominant member is unable to meet. Both members embark onto an escalation of mutual hostility, resentment, and guilt. The United States, despite its magnanimous foreign aid gestures, is continuously made to feel inadequate (not enough aid or not the right

⁹Ibid.

kind) and in fact appears helpless to control the fractious behavior of its recipients. One would not be exaggerating the nature of the U. S. dependency relationships with various countries by casting it in the role of the "helpless giant" who can "never do right."

Proposition 11 The subordinate member is often unaware of his feelings of envy and jealousy toward the dominant member. These feelings are created by the asymmetry of power, prestige, and possession. If left unresolved, these feelings fuel the covert conflict into a prolonged hostile-dependent relationship marked by impatience, compulsive competition, greed, guilt, increasing demands, and unfulfilled needs. No overt presentation of anger or resentment is evident. Instead, the dominant member is praised in order to ward off fear of retaliation and feelings of guilt.

Such a phenomenon is especially true of Western allies who resent their military-economic dependency on the United States. While reaffirming their faith in NATO, a few prominent allies scurry about the world making technological-economic deals in quiet defiance of the United States. However, if the United States fails to consult its allies, they then become petulant, acting as if their integrity had been seriously injured and their economies drastically deprived. Envy and jealousy are two affects which gnaw at and gradually erode whatever stability exists in an asymmetric relationship. Only a self-conscious effort at monitoring these affects can obviate the more serious psychological consequences.

Proposition 12 The subordinate member tends to move to open conflict by recognizing the inequality and questioning the underlying basic assumption of the dependent relationship.¹⁰ This trend is in direct opposition to the dominant member who attempts to maintain the status quo and obviate any overt expression of discontent and hostility. One might conceivably create a theoretical continuum extending from overt to covert conflict that would delineate, at any given time, the nature of the dependent relationship and the demands and characteristics of the involved members. Portugal's relationships with her African colonies revealed an initial period of quiescence marked by submission of the subordinate colonies, followed by a

¹⁰Ibid.

period of covert (guerrilla) conflict in an attempt to politicize the inequality, finally terminating in open conflict and eventual national independence.

Proposition 13 Both the dominant and subordinate members in a dependent relationship avoid conflicts of interest, aiming instead at the psychological destruction of the adversary. Each, in turn, subjugates the other through self-serving techniques. The subordinate member denies the dominant member the necessary feedback information required to validate the dominant member's actions and reality. Otherwise, the dominant member persists in his own initiated social reality without advantage of consensual validation. In the international arena, what saves the dominant member from a totally delusional system are the realistic political-economic demands for a viable national posture and international strategy.

The dominant member, on the other hand, deprives the subordinate member of psychological integrity and self-esteem through the creation of a dependent donor-client relationship and the subsequent assignment of secondary status. In the true sense of a Hegelian dialectic, each member is dependent on the other and subjugated to the unequal demands, needs, and tactics of the other. The resolution is not, as Hegel would forcibly prescribe, a synthesis of this inequality, but sometimes a total redefinition and eventual realignment of the asymmetry, since in an unequal relationship the oppressed may become the oppressor, and the oppressor the oppressed. This is the true paradox and tragedy of inequality.

We are not, however, limited to either the cynicism of human (nation-state) frailty nor the despair of inevitable failure. Inherent in the distortion of inequality is the possible clarity of equality. To arrive at equality one must first recognize that the dependency relationship is ipso facto unequal; also that this inequality retains certain irrational characteristics (as well as rational ones), properties of both the dominant and subordinate members which spiral a covert conflict marked by disguised anger, hostility, ambivalence, jealousy, and envy as well as admiration and positive affect.

Once recognized, they may be minimized by preempting the need to develop a dependent relationship through multinational aid and coequal alliances, thereby obviating the designation of the subordinate as dependent, underdeveloped, or in need. Other alternatives include self-directed programs of autonomy (e. g., U. S. Project Independence

for 1980). Toward the third world an alternative strategy for the major powers might include "benign neglect" or disengagement (especially military withdrawal), allowing the third world countries an opportunity for self-definition and psychological autonomy without the guise of imposed benevolence. Still another strategy would be to increase mutual dependency, as for example the U.S. vis-à-vis the U.S.S.R. and the C.P.R., based on the psychological premise that increasing the mutual interests diminishes the possibility of both covert and overt conflict.